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ABSTRACT

This summary of the 1982-83 School Utilization Study updates and extends the results of a 1976-77 study of school utilization of instructional television and examines changes in instructional television availability and use patterns between 1977 and 1983. The study reported surveyed 619 school superintendents, 1,350 principals, and 2,700 teachers about in-school instructional applications of programming and equipment in the areas of audio/radio, instructional television, computers, and other media. Following an introduction and overall summary of the major findings, the availability of instructional media is considered in more detail. An analysis of instructional media use is drawn primarily from teacher questionnaire responses. Data on support for instructional media are reported, including financial support, support personnel, and district and school policy. Included are 121 data tables and technical appendices containing a summary of the study design and procedures, copies of the 1983 survey instrument, a discussion of the study reliability, supporting tables for reported results, and a list of study advisory committee members. (LMM)

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1982-83 Final Report

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School Utilization Study

Availability, Use, and Support of Instructional Media

John A. Riccobono

1982-83 Final Report

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Preface

Since 1970, the Corporation for Public Broadcasting (CPB) and the National Center for Education Statistics (NCES) have co-sponsored a program of data acquisition and statistical analysis on public broadcasting. As part of this program, the School TV Utilization Study was conducted in 1976-77, representing the first investigation of the availability and use of instructional television (ITV) to be conducted on a nationwide scale. The results of this study provided valuable insights into the role played by ITV in the nation's classrooms. Such information is needed as a basis for effective planning, implementation, and evaluation of policies and programs designed to enhance educational achievement and to upgrade the instructional delivery system.

The six years since the 1976-77 School TV Utilization Study have been marked by significant changes in student enrollment, financing for materials, cost of television equipment, and the variety of programming available for classroom use. At the same time, other media have become widely available. Consequently, CPB and NCES conducted the current study to update the previous research on ITV and to extend the investigation into the availability and use of audio/radio, computers, and other media in the schools.

We extend our sincere appreciation to all those who contributed to the successful conduct of this study. We are indebted to our colleagues at the ten national education and broadcasting organizations that endorsed the study: American Association of School Administrators, American Federation of Teachers, Association for Educational Communications and Technology, Council of Chief State School Officers, National Association of Elementary School Principals, National Association of Secondary School Principals, National Catholic Education Association, National Education Association, National Public Radio, and Public Broadcasting Service.

The final design of the study and content of this report reflect the sound advice received from another group of educational and public broadcasters, the members of our Study Advisory Committee. Their names and primary affiliations are listed in Appendix E.

Brenda Jochums of the University of Lowell, Massachusetts, worked closely with the principal investigator, John A. Riccobono, throughout the study and was especially helpful during the instrument design stage.

At the Corporation for Public Broadcasting, Douglas F. Bodwell and Mary Sceiford made considerable contributions, from initial design planning through critical review of report drafts. Denise Wood deserves special recognition; she helped in ways too numerous to mention, and in large part was responsible for effective communication among the many involved parties.

At the National Center for Education Statistics, Paul Mertins, Doug Wright, and Sam Peng provided guidance and support throughout the study.

Our associates at Research Triangle Institute (RTI) of North Carolina were responsible for the survey operations aspects of the study. Special acknowledgment goes to Graham Burkheimer, RTI project director, and to Barbara Elliott, who typed, edited, and assembled the various drafts of the report.

A final word of acknowledgment and an expression of gratitude are due to the thousands of teachers, principals, and superintendents who agreed to participate in this study and who, despite their busy schedules, took the time to respond to our questionnaires. Without their generous assistance and cooperation, the success of this study would not have been possible.

Peter J. Dirr
Project Director
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Introduction

A. GENERAL

Educational technology can significantly affect American education in several ways, such as broadening the potential for delivery of educational programs to learners at all age and grade levels and compensating for the sometimes adverse effects of geography and economic status on the quality of education available to the student. Yet, even today, little is known or agreed upon concerning the role and impact of various instructional technologies in our nation's schools. This report summarizes results from the 1982-83 School Utilization Study (SUS-83). The principal purpose of this study is to update and extend the results of the 1976-1977 School TV Utilization Study (SUS-77)*, which examined the availability and use of instructional television (ITV) in American schools, and to examine changes in ITV availability and use patterns between 1977 and 1983.

B. OVERVIEW OF SUS-83 STUDY DESIGN

In order to gather nationally descriptive information on the availability, use, and support of instructional technology, data were solicited from three groups of educators: school district superintendents, building principals, and classroom teachers. A stratified multistage probability sample was employed that involved, first, selecting a sample of 619 school districts and Catholic dioceses (with enrollments of 300 or more), then a sample of 1,350 schools within selected districts, and, finally, a sample of 2,700 teachers within selected schools. The determination of sample sizes was based on considerations of expected sampling error of estimates and resources available for conducting the study. The final sample is representative of approximately 11,500 public school districts and Catholic dioceses, 81,000 school buildings, and 2,137,000 classroom teachers.

The SUS-83 survey was conducted by mail questionnaire with telephone follow-up interviews of mail nonrespondents. Separate questionnaires were constructed and pretested for each respondent group (superintendents, principals, and teachers). Copies of these questionnaires appear in Appendix B. Individual questions were directed to those respondents who would best be able to provide the requested information. Thus, questions about media availability were directed to all three groups, although each group was asked to respond from a different perspective. Superintendents were asked about district-wide availability; principals, about school-wide availability; and teachers, about individual classroom availability. Questions about support for media were restricted to the superintendent and principal questionnaires, and questions about actual use of the media were directed primarily to classroom teachers.

Data were collected from February through May 1983. Final response rates for the three questionnaires were 86 percent for superintendents, 84 percent for principals, and 80 percent for teachers.

A sampling weight was assigned to each member in the original sample to account for unequal selection probabilities; these weights were further adjusted for instrument nonresponse in an attempt to reduce, to the extent possible, the resulting potential bias. Adjusted weights were then used to estimate results for the total populations of superintendents, principals, and teachers in the nation. Further detail on the SUS-83 design and methodology appears in Appendix A.

C. DEFINITION OF TERMS

This report focuses on the availability, use, and support of various instructional technologies or media. For purposes of this study, four major types or categories of instructional media were defined:

*P.J. Dirr and R.J. Tedone, Uses of Television for Instruction 1976-77, Final Report of the School TV Utilization Study (Washington, D.C.: Corporation for Public Broadcasting and National Center for Education Statistics, 1979).

1. *Instructional Television (ITV)*: *Any* in-school uses of television programming and equipment for instructional purposes.
2. *Audio/Radio*: *Any* in-school uses of instructional programming and equipment employing sound as the major medium (e.g., radio programs, records, sound filmstrips, audiotapes/cassettes).
3. *Computer*: *Any* in-school uses of computer software and equipment (microcomputers or terminals connected to a central processor) used interactively by students for instructional purposes. The use of computers for administrative purposes is excluded.
4. *Other Media*: *Any* in-school uses of other devices for instructional purposes not included in the categories above (e.g., film, silent filmstrips, overheads).

Several classification variables are used routinely for tabular presentation of results in this report. Two of these variables, district size and district wealth, are used for district-level SUS-83 estimates. *District size* is based on the total average daily student attendance of the school district and is classified into five categories:

- 0 to 2,499 students;
- 2,500 to 4,999 students;
- 5,000 to 9,999 students;
- 10,000 to 24,999 students; and
- 25,000 students and over.

These size categories are consistent with those employed in SUS-77 and correspond to the standard NCES classification system based on enrollment. *District wealth*, the other major district classification variable, is based on reported per-student expenditure and, for SUS-83, is defined by the following four categories:

- 0 to $1,900;
- $1,901 to $2,301;
- $2,302 to $2,736; and
- $2,737 and over.

School- and classroom- (teacher) level estimates are typically reported by *school level*. Three categories of school level were defined:

- elementary schools (schools with a lowest grade of lower than 6),
- senior high schools (schools with a lowest grade of higher than 8), and
- middle/junior high schools (all other schools).

Here again, the school-level categories for SUS-83 are consistent with those defined for SUS-77. It should be noted that special schools (e.g., special education only, vocational/technical, adult education, and alternate/continuation education only) were excluded from this study.

D. HOW TO READ THE TABLES IN THIS REPORT

Most tables in this report will contain several column headings. The cell entries in the tables typically are weighted percentages (rounded to the nearest whole percent) or means and are based on the group indicated in the column heading. Because these estimates are based on a sample of superintendents, principals, and teachers, they may vary somewhat from the figures that would have been obtained if a complete census survey had been undertaken using the same instruments and procedures. This sampling or chance variation is measured by the standard error. For the total population, standard errors of the tabled SUS-83 percentage estimates are no greater than ± 3.6 percent, 2.3 percent, and 1.7 percent, respectively, for superintendents, principals, and teachers. Because standard errors for subgroup estimates are likely to be somewhat larger, the reader should refer to Appendix C for a discussion of the reliability of reported estimates and their associated standard errors.

In most cases, the last two rows of each table will include the actual "number of sample cases" on which the weighted estimates are based and the "estimated population size," which represents the approximate number of superintendents, principals, or teachers (depending on the particular table) nationally who are estimated to fall into each of the categories indicated by the column headings.

E. STRUCTURE OF THIS REPORT

This report is organized into six major sections, including this introduction: Section II provides an overall summary of the major findings of the study; Section III considers in more detail the availability of instructional media, summarizing information obtained from all three survey questionnaires; Section IV deals with use of the media for instruction, drawing information primarily from teacher questionnaire responses; Section V addresses questions about support for instructional media, including financial support, support personnel, and district and school policy; and Section VI compares television findings from SUS-77 and SUS-83.

Five technical appendixes also are provided: Appendix A supplies a summary of the SUS-83 study design and procedures; Appendix B includes copies of the SUS-83 survey instruments; Appendix C offers a brief discussion of the precision of reported estimates and general standard errors; Appendix D provides supporting tables for certain reported results; and Appendix E lists the members of the Study Advisory Committee.

Summary of Major Findings

A. AVAILABILITY OF INSTRUCTIONAL MEDIA (1982-83)

During 1982-83, the principal forms of instructional media examined in this study (ITV, audio/radio, computers) were available to at least some teachers in about nine of ten districts and the great majority of schools in the nation. Degree of availability at the teacher level varies, however, depending on the particular medium. About 88 percent of the nation's teachers had audio/radio programming available for use with their classes; for ITV and computers, the corresponding figures were 70 percent and 44 percent, respectively. Availability of "other media" is known to be widespread and therefore was not assessed in this survey.

Reported sources of programming availability and types of equipment associated with various instructional media differed for each medium. Most districts and schools, about 70 percent, reported ITV signal availability directly off-air over a public television station. Many public television stations provide instructional programming through videocassettes, cable, and ITFS in addition to or in place of direct off-air transmission; however, no attempt was made in this study to link the public television station with these alternative sources of delivery. Where ITV was available, 97 percent of teachers had access to television sets; three of four teachers had access to color sets. Videotape players/recorders were also generally available to teachers, with only 19 percent indicating that they had no means of recording ITV programs off-air. Both television sets and videotape/cassette machines were more available to teachers in elementary schools than in middle/junior or senior high schools. Among elementary schools, there was one television set for about every five teachers, whereas the ratio was one for nine and one for 11 for middle/junior and senior high schools, respectively. Videotape/cassette machines were considerably less available to teachers than were television sets, with only one such piece of equipment for every 15 elementary school teachers, 21 middle/junior high teachers, and 23 senior high teachers. Television equipment was most often rotated among classrooms on request, especially in high schools, although a substantial proportion of schools preferred to keep and use the equipment in specific classrooms, a media center or library, or an auditorium.

The two most common sources of audio/radio programming availability indicated by teachers were audiotapes/cassettes (93 percent) and records (68 percent). Only one in seven teachers reported programming available directly off-air. As with ITV equipment, audio/radio equipment was much more available to elementary school teachers than to middle/junior high or senior high teachers. In elementary schools, there was about one radio for every 11 teachers; in middle/junior high schools, the ratio was 1:19; and, in senior high schools, the ratio was 1:27. Audiotape/cassette machines were much more available to individual teachers, with about one such machine for every three elementary school teachers, four middle/junior high teachers, and six senior high teachers.

Although computers were available in about three out of four (or 63,000) of the nation's schools, less than half (44 percent) of the nation's teachers reported computers available for use with their classes. Schools with computers reported an average of about five microcomputers and/or terminals. In all, an estimated 335,000 computers (38,000 terminals and 297,000 microcomputers) were available for classroom instruction. School-level computer availability was greatest in senior high schools (99 percent), followed by middle/junior high (90 percent) and elementary schools (70 percent). Virtually all schools with computers had microcomputers; however, terminals were concentrated at the middle/junior high (16 percent) and especially senior high (39 percent) levels.

B. USE OF INSTRUCTIONAL MEDIA (1982-83)

Each of the three major instructional media types was used by more than half the nation's teachers to whom the media were available in 1982-83. Proportionately

more teachers used audio/radio (75 percent), when available, than either ITV (54 percent) or computers (62 percent), regardless of school level. Teacher use of ITV and computers was roughly equivalent at the middle/junior and senior high levels, although at the elementary level proportionately more teachers indicated using computers (71 percent) than ITV (56 percent) with their classes. Since ITV was available to substantially more teachers, however, the actual number of teachers who used ITV (791,000) was considerably higher than the number who used computers (582,000). Moreover, an estimated 18.5 million students received some portion of their instructional program from ITV in 1982-83.

Audiotapes and records were by far the most frequently used forms of audio/radio equipment. Almost all (97 percent) teachers who used audio/radio reported typically spending some time each week listening to audiotapes/cassettes, and about 86 percent indicated weekly use of records. In contrast, only 16 percent of these teachers indicated weekly use of direct off-air radio broadcasts.

About four of ten teachers with ITV available (42 percent, or about 620,000 teachers) used at least one ITV series regularly (used 75 percent or more of one or more series) in 1982-83. Regular use of ITV was proportionately higher among elementary school teachers (48 percent) than middle/junior high (40 percent) or senior high teachers (28 percent). This is consistent with the finding that about three out of four senior high teachers preferred to use selected programs from series, compared to 62 percent of middle/junior high teachers and 35 percent of elementary school teachers. In all, teachers named 580 ITV series that they had used, regularly or irregularly, during the year.

Almost half (47 percent) of the school districts with ITV available produced some of their own ITV programs. At the school level, such original productions were more likely to be undertaken by senior high (56 percent) and middle/junior high (52 percent) schools than by elementary schools (29 percent). Both district and school use of original ITV productions was primarily student-oriented, that is, for production experience for students, for instruction, for student feedback of their own performance.

Teachers at all grade levels indicated that science and social science were the most common subject areas for which ITV programming was used, followed closely by language arts. These were also the areas, along with math and reading, for which teachers thought new ITV programming was most needed.

Teachers who used ITV generally attempted to integrate program viewing with the overall curriculum and instructional process. Almost all teachers devoted class time to preparatory or follow-up discussion of ITV programs, although secondary school teachers typically allowed much more time for such discussion than did elementary school teachers. About three out of four teachers at all school levels indicated that they sometimes or frequently related classroom assignments to ITV program viewing. ITV guides were widely distributed, and, where they were available, about 70 percent of the teachers indicated that they used suggestions found in these guides in presenting ITV programs to their classes.

On the average, teachers who used ITV in 1982-83 reported a total viewing time of about one hour and 45 minutes per week. Two out of three of these teachers indicated that they typically spent some time (averaging about one-half hour) each week watching programs from ITV series, whereas less than one-third of the teachers spent any time viewing programs from commercial television.

According to both principals and teachers, instruction in computer literacy and learning enrichment in specific subject areas were the two most common educational uses of computers. Challenge use for high achievers and remedial instruction for regular students were also widespread uses, especially in elementary schools. Instruction in computer literacy, computer applications, and computer programming was indicated more frequently by secondary school principals and teachers.

Principals' and teachers' attitudes toward computers were generally positive. About 82 percent of the nation's teachers believed that computers could help them to teach more effectively, whereas only 13 percent believed that having some students work with computers was seriously disruptive to the total class. About 90 percent of all teachers indicated that they wanted more training in computers and that they should be included in the selection of instructional software. The overwhelming majority of principals thought that they and their teachers needed help in planning for or dealing with the new demands brought about by the recent mass introduction of computers to the nation's schools.

C. SUPPORT FOR INSTRUCTIONAL MEDIA (1982-83)

Support for instructional media was demonstrated in a variety of ways, including financial support, staff, training programs, and district and school policies and practices toward the media. Financial support for instructional media differed greatly according to district size and wealth. In 1982-83, for those able to break out media budget categories, almost half (45 percent) of the average total media budget for districts was allocated to computers, whereas about 33 percent of the budget went to "other media," 15 percent to ITV, and 7 percent to audio/radio.

Almost all superintendents (92 percent) indicated that financial support for computers had increased over the past three years. About 42 percent of the districts indicated increased ITV support over the past three years, and a similar number (41 percent) reported that it had remained the same during this period. With regard to audio/radio and other media, most superintendents indicated constant support (almost 60 percent) or decreased support (about 15 percent) over the past three years. No consistent relationship was observed between district size or wealth and three-year trends of per capita financial support.

District budgets, although typically the major financing source for ITV, audio/radio, and other media, were only one source of media funding. According to superintendents, the major source of equipment funds for computers was federal programs. Roughly one fifth of the funding for ITV equipment also came from federal programs, whereas school building budgets contributed proportionately more of the equipment funds for audio/radio and other media.

Where media were available, almost two thirds (64 percent) of the districts had someone with district-wide responsibility for computers, and about half (50 percent) had someone with such responsibility for ITV. Where both media were available, different persons usually coordinated them, typically devoting about 20 percent of their time to media coordination. Media coordinators in large districts devoted more time to such activities and were more likely to have other staff to assist them.

Designation of media coordinators was even more common at the school level, although such coordination was typically a part-time responsibility. About 77 percent of schools with computers available reported the presence of a building-level computer coordinator. Such a person existed for ITV in 55 percent of the schools. In general, school coordinators for both ITV and computers had been trained in the use of the medium.

About 54 percent of all principals reported having training in computers, 49 percent in "other media," 42 percent in ITV, and 41 percent in audio/radio. Almost all of the principals trained in computers and half of those trained in ITV reported such training in the past three years; fewer principals reported training in "other media" (33 percent) and audio/radio (18 percent) in the past three years. For teachers, the pattern was somewhat different. The highest percentage of teachers indicated having received training in "other media" (60 percent), followed by audio/radio (44 percent), computers (40 percent), and ITV (31 percent). Teacher training in ITV, audio/radio, and/or other media was most often through formal undergraduate programs, whereas the most frequent source of training in computers was through school-selected, in-service workshops.

Finally, the majority of principals thought that, at the district level, use of all instructional media was strongly encouraged, or encouraged but left to the discretion of individual schools and teachers. Teachers' responses indicated a similar pattern of perceived support by principals regarding the use of instructional media.

D. CHANGES IN AVAILABILITY, USE, AND SUPPORT OF INSTRUCTIONAL TELEVISION (1977-1983)

As noted earlier, the 1976-77 School TV Utilization Study focused only on *instructional use of television;* therefore, comparisons about changes from 1977 to 1983 can be made only for that medium. Significant trends are noted in two areas: availability and use.

1. Availability

Television for instruction is available to approximately 71 percent of all teachers in the United States. This is virtually unchanged from 1977. Although the ratio of teachers per television set has remained unchanged, the number of teachers who have access to color sets has increased from 34 percent to 75 percent. Nevertheless, at the elementary level, 29 percent of teachers still have access only to black and white television sets.

The videocassette recorder has assumed an increasingly important role in the schools. Three fourths of all schools had one or more recorders available for use in 1983 compared to one third in 1977.

2. Use

The number of teachers making *any* use of television for instruction in 1982-83 was 791,000, or about 37 percent of *all* teachers nationally. This slight drop from 1976-77 is not statistically significant. Where teachers report in SUS-83 that television is *available* to them, the percentage of teachers using instructional television rises to 54 percent.

Overall, the percentage of teachers who used television regularly did not change significantly between 1977 and 1983, with roughly 30 percent of all teachers indicating regular use at both time points. At the elementary level, however, the percentage of teachers who used television regularly declined significantly (from 42 percent in 1977 to 33 percent in 1983). Nevertheless, regular use continued to be proportionately higher among elementary school teachers than among secondary school teachers.

The SUS-83 survey reconfirmed the SUS-77 results that teachers who use television for instruction generally integrate program viewing into the overall curriculum and instructional process. The amount of class time teachers devoted to preparatory and follow-up activities around program viewing increased significantly since 1977.

In summary, the status of television for instruction has remained relatively stable from 1977 to 1983. The percentage of teachers having programming available remains the same. In both 1977 and 1983, about 30 percent of the classrooms did *not* have programming available.

Use patterns show changes that differ by grade level. Fewer elementary school teachers are using television, but more middle/junior and senior high teachers are using it, probably due to the increased number of videorecorders. Computer use may be replacing time formerly spent with television at the elementary level; however, this is speculation and requires follow-up study.

Finally, teachers who use television are using it more often and spending more time integrating the television lessons into classroom activities.

Availability of Instructional Media (1982-83)

This section presents results pertaining to the availability of instructional media at the school district, building, and classroom levels. Clearly, the concept of availability is both complex and multidimensional. The SUS-83 survey included items aimed at assessing several aspects of media availability, each of which provides a somewhat different perspective on the subject. The survey included questions about programming and signal availability as well as equipment availability. Factors influencing availability were also assessed, including the location and quality of equipment, procedures for replacing old equipment, and difficulties associated with use.

A. DISTRICT AVAILABILITY OF MEDIA (1982-83)

According to school district estimates, instructional programming via the major types of instructional media was available to at least some students in the vast majority of all school districts: ITV, audio/radio, and computers were available in 91 percent, 86 percent, and 94 percent of the nation's school districts, respectively. Table 1 shows that although these media were available in nearly all of the larger districts (measured by number of students), about nine of ten superintendents in the smallest districts also indicated media availability. A similar pattern was observed for district wealth (measured by per-pupil expenditure), with the greater proportional availability in the wealthiest districts (Table 2). This survey did not assess the availability of "other media."

The methods of reception and types of equipment associated with various instructional media naturally differ for each type of medium, and in many cases, a medium is made available by more than one method. Nearly four of five superintendents of districts with ITV available reported ITV programming available from cassette or videotape. Substantial percentages of superintendents also reported ITV programming available through direct, off-air broadcast from public television (72 percent); direct broadcast from commercial

Table 1 PERCENTAGE OF DISTRICTS REPORTING AVAILABILITY OF MEDIA, BY DISTRICT SIZE AND TYPE OF MEDIUM, 1982-83[a]

		Size of District				
Medium	Total[b]	0-2,499	2,500-4,999	5,000-9,999	10,000-24,999	25,000 and over
ITV	91%	89%	94%	97%	98%	99%
Audio/radio	86	87	84	82	86	96
Computers	94	91	99	97	98	99
Est. pop. size	11,500	7,700	2,000	1,000	600	220

[a]As determined from Items 6, 14, and 17 of the Superintendent Questionnaire.
[b]Analysis based on all superintendents.
NOTE: For number of sample cases, see Appendix D.

Table 2 PERCENTAGE OF DISTRICTS REPORTING AVAILABILITY OF MEDIA, BY DISTRICT WEALTH AND TYPE OF MEDIUM, 1982-83[a]

		Wealth of District			
Medium	Total[b]	0-$1,900	$1,901-2,301	$2,302-2,736	$2,737 and over
ITV	91%	90%	89%	88%	95%
Audio/radio	86	87	79	81	92
Computers	94	94	92	89	99
Est. pop. size	11,500	3,100	2,800	2,800	2,800

[a]As determined from Items 6, 14, and 17 of the Superintendent Questionnaire.
[b]Analysis based on all superintendents.
NOTE: For number of sample cases, see Appendix D.

television (62 percent); and cable television (53 percent). Many public television stations also provide instructional programming through other means, including videocassettes, cable television, and ITFS. Table 3 shows that for each method of reception, there was generally a direct positive relationship between ITV programming availability and district size. As seen in Table 4, no such consistent relationship existed between availability and methods of reception or district wealth.

Information from superintendents in districts with programming available suggests that availability of television sets allows reception of television programming by virtually all schools (96 percent). As shown in Tables 5 and 6, in almost every category of district size or wealth and across all school levels, more than nine of ten school buildings had at least one television set for such purposes. According to superintendents' estimates, these schools had an average of six television sets, with schools in the smallest districts averaging about four sets and those in the largest districts averaging about ten sets. Somewhat surprisingly,

Table 3 PERCENTAGE OF DISTRICTS REPORTING ALL METHODS OF ITV AVAILABILITY, BY DISTRICT SIZE, 1982-83[a]

Method of Availability	Total[b]	Size of District				
		0-2,499	2,500-4,999	5,000-9,999	10,000-24,999	25,000 and over
Direct off-air broadcast from public television	72%	69%	77%	81%	76%	87%
Direct broadcast from commercial television	62	59	66	67	74	75
Cable television	53	52	49	63	64	56
Cassette or videotape	79	75	85	82	88	91
Closed-circuit system	19	15	24	27	30	36
Master antenna system	18	16	20	25	18	31
ITFS (Instructional Television Fixed Service)	4	3	2	10	7	20
No. of sample cases	514	125	92	96	93	108
Est. pop. size	10,600	6,900	1,900	1,000	600	200

[a]As determined from Item 6 of the Superintendent Questionnaire. Respondents were asked to check all methods that applied.
[b]Analysis restricted to superintendents of districts with ITV available.

Table 4 PERCENTAGE OF DISTRICTS REPORTING ALL METHODS OF ITV AVAILABILITY, BY DISTRICT WEALTH, 1982-83[a]

Method of Availability	Total[b]	Wealth of District			
		0-$1,900	$1,901-2,301	$2,302-2,736	$2,737 and over
Direct off-air broadcast from public television	72%	77%	74%	68%	67%
Direct broadcast from commercial television	62	61	62	53	69
Cable television	53	50	52	64	51
Cassette or videotape	79	80	80	68	91
Closed-circuit system	19	18	21	23	16
Master antenna system	18	20	13	18	16
ITFS (Instructional Television Fixed Service)	4	3	7	3	3
No. of sample cases	467	118	118	117	114
Est. pop. size	10,600	2,800	2,600	2,500	2,700

[a]As determined from Item 6 of the Superintendent Questionnaire. Respondents were asked to check all methods that applied.
[b]Analysis restricted to superintendents of districts with ITV available.

Table 5 PERCENTAGE OF SCHOOLS WITH TELEVISION SETS, BY DISTRICT SIZE, 1982-83

School Level	Total[b]	Size of District: 0-2,499	2,500-4,999	5,000-9,999	10,000-24,999	25,000 and over
Elementary schools	92%	90%	97%	94%	92%	95%
Middle/junior high schools	95	94	99	96	98	98
Senior high schools	96	95	99	96	99	99
All schools	96	95	97	93	97	97
Est. pop. size	10,600	6,900	1,900	1,000	600	200

[a]As determined from Item 9 of the Superintendent Questionnaire.
[b]Analysis restricted to superintendents of districts with ITV available.
NOTE: For number of sample cases, see Appendix D.

Table 6 PERCENTAGE OF SCHOOLS WITH TELEVISION SETS, BY DISTRICT WEALTH, 1982-83[a]

School Level	Total[b]	Wealth of District: 0-$1,900	$1,901-2,301	$2,302-2,736	$2,737 and over
Elementary schools	92%	90%	94%	94%	97%
Middle/junior high schools	95	91	96	97	96
Senior high schools	96	91	97	99	97
All schools	96	94	96	94	96
Est. pop. size	10,600	2,800	2,600	2,500	2,700

[a]As determined from Item 9 of the Superintendent Questionnaire.
[b]Analysis restricted to superintendents of districts with ITV available.
NOTE: For number of sample cases, see Appendix D.

Table 7 PERCENTAGE OF SCHOOLS WITH VIDEOTAPE EQUIPMENT, BY DISTRICT SIZE, 1982-83[a]

School Level	Total[b]	Size of District: 0-2,499	2,500-4,999	5,000-9,999	10,000-24,999	25,000 and over
Elementary schools	68%	70%	70%	57%	55%	57%
Middle/junior high schools	87	82	96	91	80	85
Senior high schools	97	97	98	95	92	92
All schools	74	77	75	62	70	67
Est. pop. size	10,600	6,900	1,900	1,000	600	200

[a]As determined from Item 9 of the Superintendent Questionnaire.
[b]Analysis restricted to superintendents of districts with ITV available.
NOTE: For number of sample cases, see Appendix D.

there appeared to be no relationship between the number of television sets per school and wealth of the district.

Flexibility in use of ITV programming is necessarily related to the appropriate timing of broadcast schedules and/or availability of videorecorders and cassettes. As of the 1982-83 school year, however, videorecorders were less widely available than television sets; about 74 percent of the schools in districts with programming available had videorecorders. Nearly all senior high schools in these districts had videotape recorders, whereas only about two thirds of the elementary schools had such equipment. There was no consistent relationship between school ownership of videotape equipment and district size (Table 7). More than nine of ten senior high schools had videotape equipment, regardless of district size or wealth. Greater percentages of elementary and middle/junior schools in the wealthiest districts possessed such equipment than did such

schools in the least wealthy districts (Table 8), however, indicating that districts with limited funds for such equipment tend to allocate them among high schools.

About 78 percent of superintendents in districts with ITV programming indicated some expansion in ITV equipment during the past three years (Table 9). Expansion most often took the form of adding videotape/cassette equipment (79 percent) and television sets (66 percent). Certain forms of expansion—replacing black and white television sets with color, adding master antenna, cable television, or internal distribution systems, and adding production equipment—seemed to be related to district size, with substantially higher percentages of larger districts reporting expansion. No consistent relationship between ITV equipment expansion and district wealth appeared.

Table 8 PERCENTAGE OF SCHOOLS WITH VIDEOTAPE EQUIPMENT, BY DISTRICT WEALTH, 1982-83[a]

School Level	Total[b]	Wealth of District			
		0-$1,900	$1,901-2,301	$2,302-2,736	$2,737 and over
Elementary schools	68%	66%	66%	64%	71%
Middle/junior high schools	87	79	88	84	93
Senior high schools	97	94	98	98	97
All schools	74	75	73	77	78
Est. pop. size	10,600	2,800	2,600	2,500	2,700

[a]As determined from Item 9 of the Superintendent Questionnaire.
[b]Analysis restricted to superintendents of districts with ITV available.
NOTE: For number of sample cases, see Appendix D.

Table 9 PERCENTAGE OF DISTRICTS REPORTING ANY ITV EQUIPMENT EXPANSION DURING THE PAST THREE YEARS, BY DISTRICT SIZE, 1982-83[a]

Past Expansion	Total[b]	Size of District				
		0-2,499	2,500-4,999	5,000-9,999	10,000-24,999	25,000 and over
Increased the number of television sets	66%	64%	72%	69%	78%	66%
Replaced black and white television sets by color	55	52	57	56	63	66
Added videotape/cassette equipment	79	79	81	73	86	78
Started a videotape/cassette library	58	59	58	51	59	64
Expanded a videotape/cassette library	44	47	38	36	36	47
Acquired videodisc equipment	13	15	11	12	4	8
Added master antenna, cable TV, or internal distribution systems	32	31	29	28	43	46
Added production equipment	26	21	37	31	21	63
None	22	23	20	23	12	25
No. of sample cases	496	109	81	92	89	98
Est. pop. size	10,600	6,900	1,900	1,000	600	200

[a]As determined from Item 12 of the Superintendent Questionnaire. Respondents were asked to check all categories that applied.
[b]Analysis restricted to superintendents of districts with ITV available.

Table 10 PERCENTAGE OF DISTRICTS REPORTING PLANS FOR ANY ITV EQUIPMENT EXPANSION DURING THE NEXT THREE YEARS, BY DISTRICT SIZE, 1982-83[a]

		Size of District				
Expansion Planned	Total[b]	0-2,499	2,500-4,999	5,000-9,999	10,000-24,999	25,000 and over
Increase the number of television sets	38%	37%	36%	45%	35%	52%
Replace black and white television sets by color	32	30	39	37	26	54
Add videotape/cassette equipment	41	36	47	62	40	57
Start a videotape/cassette library	26	27	20	35	23	34
Expand a videotape/cassette library	42	40	43	49	43	48
Acquire videodisc equipment	16	17	8	17	26	17
Add master antenna, cable TV, or internal distribution systems	21	18	25	30	19	44
Add production equipment	21	18	17	40	30	42
None	40	45	33	22	29	29
No. of sample cases	469	109	81	92	89	98
Est. pop. size	10,600	6,900	1,900	1,000	600	200

[a]As determined from Item 12 of the Superintendent Questionnaire. Respondents were asked to check all categories that applied.
[b]Analysis restricted to superintendents of districts with ITV available.

Table 11 PERCENTAGE OF DISTRICTS REPORTING ANY PLANS FOR ITV EXPANSION DURING THE NEXT THREE YEARS, BY DISTRICT WEALTH, 1982-83[a]

		Wealth of District			
Expansion Planned	Total[b]	0-$1,900	$1,901-2,301	$2,302-2,736	$2,737 and over
Increase the number of television sets	38%	35%	44%	25%	43%
Replace black and white television sets by color	32	18	38	31	44
Add videotape/cassette equipment	41	39	48	26	52
Start a videotape/cassette library	26	18	38	22	29
Expand a videotape/cassette library	42	40	48	20	57
Acquire videodisc equipment	16	16	15	15	15
Add master antenna, cable TV, or internal distribution systems	21	10	24	14	32
Add production equipment	21	14	26	20	24
None	40	49	37	45	29
No. of sample cases	480	121	119	121	119
Est. pop. size	10,600	2,800	2,600	2,500	2,700

[a]As determined from Item 12 of the Superintendent Questionnaire. Respondents were asked to check all categories that applied.
[b]Analysis restricted to superintendents of districts with ITV available.

Superintendents were also asked about their plans for ITV equipment expansion over the next three years. As Table 10 shows, 40 percent of the districts in which ITV programming was available planned no further expansion of ITV equipment in the next three years. Future expansion appeared more likely in large districts than in small districts and, not surprisingly, in very wealthy districts than in less wealthy districts (Table 11). According to superintendents who anticipated some expansion in the next three years, the major area of expansion was to continue to be in the form of videotape/cassette equipment and libraries.

In looking at past and planned expansion in terms of television sets, it is interesting to note that 34 percent of all superintendents reporting ITV availability indicated that their districts had a systematic process for replacing old ITV equipment, with somewhat higher percentages of the wealthiest districts reporting the existence of such a process (Table 12).

As seen in Table 1, 86 percent of all superintendents reported audio/radio available for instructional use in their districts, a figure slightly below that reported for ITV (91 percent) and computer (94 percent) availability. Of those districts with audio/radio programming available, audiotapes/cassettes (used by 68 percent) and records (used by 54 percent) were the primary methods of reception (Table 13). About equal numbers of districts indicated a signal availability directly off-air over a public radio station (45 percent) and over a commercial radio station (46 percent). Audio/radio programming was more likely to be available in very large districts than in small districts (Table 13); however, there was no direct relationship between the wealth of the district and sources of audio/radio programming (Table 14). Only about 5 percent of districts with audio/radio programming available indicated that they owned or operated a radio station: a public radio (National Public Radio) station (1 percent), another kind of noncommercial station (2 percent), or some other type of broadcast radio station (2 percent).

Table 12 PERCENTAGE OF DISTRICTS WITH SYSTEMATIC PROCESS FOR REPLACING OLD ITV EQUIPMENT, BY DISTRICT WEALTH, 1982-83[a]

System to Replace Old ITV Equipment	Total[b]	Wealth of District			
		0-$1,900	$1,901-2,301	$2,302-2,736	$2,737 and over
Percentage of districts	34%	33%	35%	30%	42%
No. of sample cases	441	109	110	111	111
Est. pop. size	10,600	2,800	2,600	2,500	2,700

[a]As determined from Item 8 of the Superintendent Questionnaire.
[b]Analysis restricted to superintendents of districts with ITV available.

Table 13 PERCENTAGE OF DISTRICTS REPORTING ALL METHODS OF AUDIO/RADIO AVAILABILITY, BY DISTRICT SIZE, 1982-83[a]

Method of Availability	Total[b]	Size of District				
		0-2,499	2,500-4,999	5,000-9,999	10,000-24,999	25,000 and over
Direct off-air over a public radio station	45%	44%	36%	48%	61%	42%
Direct off-air over a commercial station	46	45	44	53	56	53
On records	54	53	59	51	57	72
On audiotapes/cassettes	68	67	68	67	71	85
Other	3	1	6	3	6	5
No. of sample cases	498	125	88	93	90	102
Est. pop. size	9,900	6,700	1,700	800	500	200

[a]As determined from Item 14 of the Superintendent Questionnaire. Respondents were asked to check all methods that applied.
[b]Analysis restricted to superintendents of districts with audio/radio available.

Table 14 PERCENTAGE OF DISTRICTS REPORTING ALL METHODS OF AUDIO/RADIO AVAILABILITY, BY DISTRICT WEALTH, 1982-83[a]

Method of Availability	Total[b]	Wealth of District			
		0-$1,900	$1,901-2,301	$2,302-2,736	$2,737 and over
Direct off-air over a public radio station	45%	43%	46%	49%	44%
Direct broadcast over a commercial station	46	53	42	44	49
On records	54	59	61	40	50
On audiotapes/cassettes	68	65	71	64	70
Other	3	1	3	2	6
No. of sample cases	451	114	114	113	110
Est. pop. size	9,900	2,700	2,300	2,300	2,600

[a]As determined from Item 14 of the Superintendent Questionnaire. Respondents were asked to check all methods that applied.
[b]Analysis restricted to superintendents of districts with audio/radio available.

Table 15 PERCENTAGE OF DISTRICTS REPORTING ALL TYPES OF COMPUTERS AVAILABLE, BY DISTRICT SIZE, 1982-83[a]

Type of Computer	Total[b]	Size of District 0-2,499	2,500-4,999	5,000-9,999	10,000-24,999	25,000 and over
No computers available	6%	9%	1%	3%	2%	1%
Only microcomputers available	66	74	57	45	45	40
Only terminals available	0[c]	0[c]	1	1	1	7
Both micros and terminals available	27	17	42	51	53	52
No. of sample cases	505	129	93	92	91	100
Est. pop. size	11,500	7,700	2,000	1,000	600	200

[a]As determined from Item 17 of the Superintendent Questionnaire. Respondents were asked to check all types that applied.
[b]Analysis based on all superintendents.
[c]Represents a positive percentage less than 0.5.

Table 16 PERCENTAGE OF DISTRICTS REPORTING ALL TYPES OF COMPUTERS AVAILABLE, BY DISTRICT WEALTH, 1982-83[a]

Type of Computer	Total[b]	Wealth of District 0-$1,900	$1,901-2,301	$2,302-2,736	$2,737 and over
No computers available	6%	6%	8%	11%	0%[c]
Only microcomputers available	66	83	66	54	66
Only terminals available	0[c]	1	1	1	2
Both micros and terminals available	27	11	25	35	32
No. of sample cases	462	115	115	119	113
Est. pop. size	11,500	3,100	2,800	2,800	2,800

[a]As determined from Item 17 of the Superintendent Questionnaire. Respondents were asked to check all types that applied.
[b]Analysis based on all superintendents.
[c]Represents a positive percentage less than 0.5.

Table 17 AVERAGE NUMBER OF COMPUTERS PER SCHOOL, BY DISTRICT SIZE, 1982-83[a]

Type of Computer	Total[b]	Size of District 0-2,499	2,500-4,999	5,000-9,999	10,000-24,999	25,000 and over
Microcomputers per school	3.26	3.28	3.26	3.01	3.68	2.53
Terminals per school	0.49	0.39	0.72	0.41	1.10	0.45
No. of sample cases	493	121	92	90	90	100
Est. pop. size	10,800	7,000	2,000	1,000	600	200

[a]As determined from Item 17 of the Superintendent Questionnaire.
[b]Analysis restricted to superintendents of districts with computers available.

As shown in Table 15, the widespread availability of computers for instruction has been a direct outgrowth of the recent proliferation of microcomputers. Almost all of the districts reporting availability of computers (94 percent) also indicated the availability of microcomputers (93 percent), whereas considerably fewer districts (28 percent) indicated that the more traditional terminals are available. The availability of microcomputers showed little relationship to district size (Table 15) or district wealth (Table 16), with more than 90 percent of nearly all size and wealth categories reporting microcomputers available. Terminals, however, were more likely to be available in large school districts, with 59 percent of the largest districts indicating the availability of such equipment. Tables 17 and 18 show the average number of computers available per school by district size and district wealth, respectively.

In districts with computers available, the equipment was typically housed permanently in specific schools (Table 19). It is interesting to note, however, that a substantial number of the largest districts provided access to computer equipment through a central, district-wide computer center (25 percent) or through a periodic rotation of the equipment among schools (15 percent).

B. SCHOOL AVAILABILITY OF MEDIA (1982-83)

Principals were asked about the availability of the various instructional media in their school buildings. As shown in Table 20, greatest availability was reported for ITV (94 percent of all schools). Differences in availability of these media, however, were almost entirely attributable to differences at the elementary school level, where the percentages of principals indicating medium availability are 93, 87, and 70 for ITV, audio/radio, and computers, respectively. At the middle/junior and senior high school levels, more than nine of ten principals indicated the availability of each type of medium.

The most frequently named method of ITV reception differed by school level (Table 21). At the elementary school level, 67 percent of the principals with ITV available indicated availability through direct off-air broadcast from public television, although more than half the principals (56 percent) indicated videotape/cassette as a method of ITV reception. The order was reversed, however, among middle/junior and senior high schools,

Table 18 AVERAGE NUMBER OF COMPUTERS PER SCHOOL, BY DISTRICT WEALTH, 1982-83[a]

Type of Computer	Total[b]	Wealth of District			
		0-$1,900	$1,901-2,301	$2,302-2,736	$2,737 and over
Microcomputers per school	3.26	2.56	2.52	3.33	3.93
Terminals per school	0.49	0.25	0.56	0.51	0.67
No. of sample cases	493	111	113	114	112
Est. pop. size	10,800	2,900	2,600	2,500	2,800

[a]As determined from Item 17 of the Superintendent Questionnaire.
[b]Analysis restricted to superintendents of districts with computers available.

Table 19 PERCENTAGE OF DISTRICTS REPORTING ALL LOCATIONS FOR COMPUTER EQUIPMENT, BY DISTRICT SIZE, 1982-83[a]

Location of Computers	Total[b]	Size of District				
		0-2,499	2,500-4,999	5,000-9,999	10,000-24,999	25,000 and over
Centralized district-wide computer center	16%	15%	8%	13%	20%	25%
Located permanently in specific schools	89	85	97	97	99	93
Rotated among schools	9	6	10	13	19	15
Other	5	6	1	6	1	13
No. of sample cases	480	119	92	98	90	100
Est. pop. size	10,800	7,000	2,000	1,000	600	200

[a]As determined from Item 19 of the Superintendent Questionnaire. Respondents were asked to check all categories that applied.
[b]Analysis restricted to superintendents of districts with computers available.

Table 20 PERCENTAGE OF SCHOOLS REPORTING AVAILABILITY OF MEDIA, BY SCHOOL LEVEL AND TYPE OF MEDIUM, 1982-83[a]

Medium	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
ITV	94%	93%	91%	97%
Audio/radio	89	87	92	95
Computers	78	70	88	99
Est. pop. size	81,000	58,000	13,000	10,000

[a]As determined from Items 7, 14, and 18 of the Principal Questionnaire.
[b]Analysis based on all principals.

NOTE: For number of sample cases, see Appendix D.

Table 21 PERCENTAGE OF SCHOOLS REPORTING ALL METHODS OF ITV AVAILABILITY, BY SCHOOL LEVEL, 1982-83[a]

Method of Availability	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
Direct, off-air broadcast from public television	67%	67%	65%	71%
Direct broadcast from commercial television	60	58	61	67
Cable television	39	37	43	47
Videotape/cassette	65	56	83	94
Videodisc	5	3	7	10
Closed-circuit system	17	16	21	20
Master antenna system	15	15	13	18
ITFS (Instructional Television Fixed Service)	4	3	4	6
No. of sample cases	1,091	543	269	279
Est. pop. size	76,000	54,000	12,300	9,700

[a]As determined from Item 7 of the Principal Questionnaire. Respondents were asked to check all methods that applied.
[b]Analysis restricted to principals of schools with ITV available.

Table 22 AVERAGE NUMBER OF FULL-TIME TEACHERS PER TELEVISION SET AND VIDEOTAPE/CASSETTE MACHINE, BY SCHOOL LEVEL, 1982-83[a]

Equipment	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
Teachers per television set	6.75	5.47	8.97	10.80
Teachers per videotape/cassette recorder/player	17.90	15.46	20.91	23.04
Est. pop. size	76,000	54,000	12,300	9,700

[a]As determined from Item 8 of the Principal Questionnaire.
[b]Analysis restricted to principals of schools with ITV available.
NOTE: For number of sample cases, see Appendix D.

Table 23 PERCENTAGE OF SCHOOLS REPORTING BEST DESCRIPTION OF LOCATION OF TELEVISION SETS, BY SCHOOL LEVEL, 1982-83[a]

Location of Television Sets	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
Kept and used in specific classrooms, except for maintenance and repair	29%	34%	18%	13%
Kept and used in media center or library	15	12	19	23
Rotated among classrooms on request	47	43	55	56
Kept and used in large rooms or auditorium	5	6	5	5
Other	5	5	3	4
No. of sample cases	936	455	227	244
Est. pop. size	64,000	45,300	10,600	8,100

[a]As determined from Item 9 of the Principal Questionnaire.
[b]Analysis restricted to principals of schools with ITV and sets available.

with substantially higher percentages of principals reporting ITV availability through videotape/cassette.

To a large extent, the availability/accessibility of television sets and equipment determines ITV availability. According to principals' estimates, both television sets and videotape/cassette machines were more available to teachers in elementary schools than in middle/junior or senior high schools (Table 22). (Because senior high schools typically are larger than elementary or middle/junior high schools, the average number of full-time teachers per unit of equipment was computed for purposes of comparison.) Among elementary schools, one television set was available for about every five full-time teachers, whereas the ratio was one to nine and one to 11 for middle/junior high schools and senior high schools, respectively. Videotape/cassette machines were considerably less available than television sets, with only one such machine available to approximately every 15 elementary teachers, 21 middle/junior high teachers, and 23 senior high teachers.

When asked for the best description of the location of television sets in school buildings, almost half of the principals with ITV and sets available indicated that their television sets were rotated among classrooms on request (Table 23). This procedure was the most frequently noted by principals, regardless of school level. About one of three elementary school principals indicated that television sets were kept and used in specific classrooms, whereas substantially smaller percentages of middle/junior high (18 percent) and senior high schools (13 percent) chose this procedure. In contrast, senior high schools were much more likely to keep and use television equipment in a media center or library.

Various types of videotape/cassette recorders were available for instructional purposes. In those schools with such equipment available, the ½-inch VHS format was by far the most frequently used, regardless of school level (Table 24). In fact, more than twice as many principals reported the availability of VHS format (60 percent) than either the Beta format (29 percent) or the ¾-inch U-matic (26 percent).

Principals with ITV available were also asked about the presence of other ITV-related school equipment or resources. About 42 percent of them indicated the availability of a videotape/cassette library in the school, ranging from 33 percent of the elementary schools to 74 percent of the senior high schools (Table 25). About one third of all schools reported the presence of such a library at the district level, whereas slightly smaller percentages indicated availability of videotapes/cassettes provided by an intermediate unit or regional library.

With regard to audio/radio, the primary methods of reception named by principals with audio/radio programming available are audiotape/cassettes and records, with 58 percent and 50 percent of principals, respectively, indicating availability from these sources (Table 26). About four of ten principals indicated signal availability directly off-air over a public radio station, and an approximately equal number reported availability from a commercial station. About half of the middle/junior high and senior high schools indicated audio/radio availability over a public address or other central distribution system, whereas only about one third of the elementary schools indicated such reception.

As with ITV equipment, audio/radio equipment appeared to be considerably more available to teachers in elementary schools than in middle/junior high or senior high schools (Table 27). At the elementary level, there was one radio available for every 11 full-time teachers. At the middle/junior high level, the ratio

Table 24 PERCENTAGE OF SCHOOLS REPORTING AVAILABILITY OF ALL TYPES OF VIDEOTAPE/CASSETTE RECORDERS/PLAYERS, BY SCHOOL LEVEL 1982-83[a]

Types of Equipment	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
½-inch Beta format	29%	25%	35%	33%
½-inch VHS format	60	58	62	68
¾-inch (U-matic)	26	23	27	34
Other	6	5	4	10
No. of sample cases	726	301	200	225
Est. pop. size	44,400	27,100	9,700	7,600

[a]As determined from Item 12 of the Principal Questionnaire. Respondents were asked to check all types that applied.
[b]Analysis restricted to principals of schools with ITV and videotape/cassette recorders/players available.

Table 25 PERCENTAGE OF SCHOOLS REPORTING AVAILABILITY OF ANY OTHER ITV RESOURCES, BY SCHOOL LEVEL, 1982-83[a]

Other ITV Resources	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
Earphones for the television set	18%	17%	18%	21%
Easy access to requested television programs (e.g., dial-own-access television)	40	42	36	32
Television studio in the school	5	4	5	14
Videotape/cassette library in the school	42	33	57	74
Videotape/cassette library in the district	34	33	39	37
Videotape/cassette provided by intermediate unit or regional library	25	21	32	38
None of the above	17	21	11	7
No. of sample cases	1,014	498	247	269
Est. pop. size	76,000	54,000	12,500	9,500

[a]As determined from Item 10 of the Principal Questionnaire. Respondents were asked to check all resources that applied.
[b]Analysis restricted to principals of schools with ITV available.

Table 26 PERCENTAGE OF SCHOOLS REPORTING ALL METHODS OF AUDIO/RADIO AVAILABILITY, BY SCHOOL LEVEL, 1982-83[a]

Method of Availability	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
Direct, off-air over a public radio station	41%	42%	38%	40%
Direct, off-air over a commercial station	43	41	43	53
On records	50	49	49	57
On audiotapes/cassettes	58	54	63	74
Over a public address or other central distribution system	37	31	51	53
Other	2	2	2	2
Don't know	1	1	2	2
No. of sample cases	1,082	541	261	280
Est. pop. size	72,000	50,000	12,500	9,500

[a]As determined from Item 14 of the Principal Questionnaire. Respondents were asked to check all methods that applied.
[b]Analysis restricted to principals of schools with audio/radio available.

Table 27 AVERAGE NUMBER OF FULL-TIME TEACHERS PER RADIO AND AUDIOTAPE/CASSETTE MACHINE, BY SCHOOL LEVEL, 1982-83[a]

Equipment	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
Teachers per radio	13.83	10.50	19.43	26.98
Teachers per audiotape/cassette machine	3.45	2.69	4.15	6.36
Est. pop. size	72,000	50,000	12,500	9,500

[a]As determined from Item 15 of the Principal Questionnaire.
[b]Analysis restricted to principals of schools with audio/radio available.

NOTE: For number of sample cases, see Appendix D.

Table 28 PERCENTAGE OF SCHOOLS REPORTING ALL TYPES OF COMPUTERS AVAILABLE, BY SCHOOL LEVEL, 1982-83[a]

Types of Computers	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
No computers available	22%	30%	10%	1%
Only microcomputers available	65	64	74	60
Only terminals available	1	1	1	3
Both micros and terminals available	12	6	15	36
No. of sample cases	969	445	249	275
Est. pop. size	81,000	58,000	13,000	10,000

[a]As determined from Item 18 of the Principal Questionnaire. Respondents were asked to check all types that applied.
[b]Analysis based on all principals.

of radios to teachers was one to 19, and at the senior high level it was one to 27. The availability of audiotape/cassette machines was similarly related to school level, although these machines seemed to be much more available than radios to individual teachers at all levels.

According to principals' estimates, computers were available for instructional use in about 78 percent (or 63,000) of the nation's schools (Table 28). In all, an estimated 335,000 computers (38,000 terminals and 297,000 microcomputers) were available for instructional purposes in these schools. The average number of micros and terminals in schools possessing such equipment was about five. The percentage of principals reporting computer availability was highest among senior high schools (99 percent), followed by middle/junior high (90 percent) and elementary schools (70 percent). Virtually all schools with computers available had microcomputers; however, the availability of terminals was concentrated in middle/junior high (16 percent) and especially senior high (39 percent) schools. Almost half (49 percent) of all schools indicated that they planned to acquire microcomputers in the next year, whereas only 5 percent of these schools planned to acquire terminals. Like video and audio equipment, computers (both micros and terminals) are more available to senior high school teachers than to elementary or middle/junior high school teachers (Table 29).

As with other media, availability of computers is to a large extent governed by logistics. About 41 percent of the principals with computers available indicated that the computer hardware was kept and used in classrooms, except for maintenance and repair, although the percentages ranged from 30 percent of the elementary schools to 66 percent of the senior high schools (Table 30). Nearly as many principals (37 percent) indicated that computer hardware was rotated among classrooms on request, although this procedure was employed much more frequently in elementary schools (45 percent) than in middle/junior high (30 percent) or senior high (21 percent) schools. Separate "computer centers" were

Table 29 AVERAGE NUMBER OF FULL-TIME TEACHERS PER MICROCOMPUTER AND TERMINAL, BY SCHOOL LEVEL, 1982-83[a]

Equipment	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
Teachers per micro	5.67	6.23	5.67	5.10
Teachers per terminal	50.16	66.67	114.16	28.51
Est. pop. size	63,000	41,500	11,700	9,800

[a]As determined from Item 18 of the Principal Questionnaire.
[b]Analysis restricted to principals of schools with computers available.

Table 30 PERCENTAGE OF PRINCIPALS REPORTING ALL LOCATIONS FOR COMPUTER HARDWARE, BY SCHOOL LEVEL, 1982-83[a]

Location of Hardware	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
Kept and used in classrooms, except for maintenance and repair	41%	30%	51%	66%
Rotated among classrooms on request	37	45	30	21
Kept and used in media center or library	29	33	26	21
Kept and used in separate "computer center"	28	20	35	46
Other	5	5	6	3
No. of sample cases	728	298	194	236
Est. pop. size	63,000	41,500	11,700	9,800

[a]As determined from Item 19 of the Principal Questionnaire. Respondents were asked to check all categories that applied.
[b]Analysis restricted to principals of schools with computers currently available.

Table 31 PERCENTAGE OF TEACHERS REPORTING CLASSROOM AVAILABILITY OF MEDIA, BY SCHOOL LEVEL AND TYPE OF MEDIUM, 1982-83[a]

Medium	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
ITV	70%	70%	71%	70%
Audio/radio	88	86	90	91
Computers	44	43	47	43
Est. pop. size	2,137,000	1,157,000	461,000	519,000

[a]As determined from Items 9, 28, and 33 of the Teacher Questionnaire.
[b]Analysis based on all teachers.
NOTE: For number of sample cases, see Appendix D.

Table 32 PERCENTAGE OF TEACHERS REPORTING ALL TYPES OF TELEVISION SETS AVAILABLE, BY SCHOOL LEVEL, 1982-83[a]

Types of television sets	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
None	3%	3%	1%	2%
Black and white only	24	29	19	17
Color only	47	47	49	44
Both black and white and color	27	21	31	36
No. of sample cases	1,518	774	370	374
Est. pop. size	1,500,000	810,000	327,000	363,000

[a]As determined from Item 10 of the Teacher Questionnaire. Respondents were asked to check all types that applied.
[b]Analysis restricted to teachers with ITV programming available.

Table 33 PERCENTAGE OF TEACHERS REPORTING VARIOUS DIFFICULTIES ASSOCIATED WITH USING ITV, 1982-83[a]

Type of Difficulty	Frequency of Difficulty[b]			
	Often	Sometimes	Seldom	Never
Finding out about programs in advance	24%	33%	24%	20%
Having programs available when I need them	32	38	19	11
Quality of programs in my subject area	22	36	28	13
Having equipment available when I need it	17	28	27	28
Having equipment in good condition	11	25	36	28

[a]As determined from Item 11 of the Teacher Questionnaire.
[b]Analysis restricted to teachers with ITV programming and sets available.
NOTE: For number of sample cases, see Appendix D.

Table 34 PERCENTAGE OF TEACHERS REPORTING ALL PROCEDURES FOR RECORDING ITV PROGRAMS, BY SCHOOL LEVEL, 1982-83[a]

Recording Procedure	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
I record it at home	11%	6%	13%	22%
I record it at school	14	11	17	17
I request it to be done by another school personnel	55	46	64	70
I have no resource to record "off-air"	19	29	7	5
I have never wanted to record "off-air"	15	17	15	10
No. of sample cases	1,457	747	353	357
Est. pop. size	1,464,000	785,000	324,000	355,000

[a]As determined from Item 12 of the Teacher Questionnaire. Respondents were asked to check all categories that applied.
[b]Analysis restricted to teachers with ITV and sets available.

much more likely to be found in senior high schools (46 percent) than in either middle/junior high (35 percent) or elementary schools (20 percent).

C. CLASSROOM AVAILABILITY OF MEDIA (1982-83)

Teachers were also asked about the availability of the various instructional media for use with any of their classes. About 70 percent of the teachers at all school levels indicated that ITV programming was available. The percentages of teachers indicating availability of audio/radio were substantially higher at each school level than those for ITV and about twice the percentages of those indicating availability of computers (Table 31). Thus, all three media were pervasively available at the district and school level, but computers were considerably less available at the teacher level.

Where ITV was available, almost all teachers (97 percent) indicated that they had access either to a black and white or a color television set (Table 32). Although three of four teachers (74 percent) indicated access to color sets, proportionately more middle/junior high and senior high school teachers (80 percent) than elementary school teachers (68 percent) reported such access. Elementary school teachers (29 percent) were more likely to have access only to black and white sets than middle/junior high teachers (19 percent) or senior high teachers (17 percent).

Teachers with ITV available were also asked to rate how often each of a number of technical features presented difficulties in their use of ITV. As shown in Table 33, "having programs available when I need them" emerged as the most widespread problem (rated as "sometimes" or "often" a problem by about 70 percent of the teachers). "Quality of programs in my subject area" and "finding out about programs in advance" also were named by most teachers (about 58 percent) as sometimes or often a difficulty.

Teachers with ITV and sets available were also asked about the procedures available for recording ITV programs off-air for later use with their classes. As Table

34 shows, 19 percent of the teachers indicated that they had no means of recording programs off-air. Off-air recording capability is least available to elementary school teachers: 29 percent of elementary school teachers, 7 percent of middle/junior high, and 5 percent of senior high teachers were unable to record off-air. Where such resources did exist, most teachers requested other school personnel do the recording.

As indicated previously, about nine of ten teachers reported audio/radio to be available for use with their classes. Table 35 shows clearly that the two most common sources of this availability were audiotapes/cassettes (93 percent) and records (68 percent). Fewer than one of seven teachers reported programming available directly off-air over a public station (14 percent) or by commercial stations (13 percent). Substantial discrepancies exist between principals' and teachers' perceptions of audio/radio availability (Tables 26 and 35). Principals respond about availability in school buildings, and, hence, groups of teachers. In many cases, they reported audio/radio availability by both broadcast and nonbroadcast means. Teachers, as individuals, however, overwhelmingly consider nonbroadcast methods as the most frequently available modes of audio instruction, possibly as a result of the greater availability of audio recorders over radios (Table 27).

Teachers with computers available were asked about the types of instructional software that were available for use with their classes. Drill and practice software was the most commonly available, especially at the elementary schools (Table 36). "Games" were available to about two thirds of the elementary school and middle/junior high teachers (with computers available), but even at the senior high level, more than half (58 percent) the teachers reported that such software was available for their use. About half the teachers at all school levels indicated that software was available for "tutorial" purposes. Software for word processing, computation and statistics, and testing and evaluation was proportionately more available to middle/junior and senior high teachers than to elementary school teachers.

Table 35 PERCENTAGE OF TEACHERS REPORTING ALL METHODS OF AUDIO/RADIO PROGRAMMING AVAILABILITY, BY SCHOOL LEVEL, 1982-83[a]

Method of Availability	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
Directly off-air over a public radio station	14%	13%	18%	14%
Directly off-air over a commercial station	13	12	15	14
On records	68	71	65	65
On audiotapes/cassettes	93	93	95	93
Over a public address or other central distribution system	14	18	11	10
Other	6	6	5	4
No. of sample cases	1,840	914	463	463
Est. pop. size	1,882,000	995,000	415,000	472,000

[a]As determined from Item 29 of the Teacher Questionnaire. Respondents were asked to check all methods that applied.
[b]Analysis restricted to teachers with audio/radio programming available.

Table 36 PERCENTAGE OF TEACHERS REPORTING ALL TYPES OF COMPUTER SOFTWARE AVAILABLE FOR INSTRUCTION, BY SCHOOL LEVEL, 1982-83[a]

Types of Software	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
Drill and practice	73%	80%	73%	58%
Tutorial	50	49	56	47
Simulation	33	31	39	33
Games	64	67	63	58
Languages for programming	25	19	31	32
Graphics	30	26	34	37
Word processing	30	24	28	47
Computation or statistics	27	22	33	34
Testing and evaluation	19	16	21	26
Other	8	9	4	8
Don't know	15	17	15	12
No. of sample cases	846	437	211	198
Est. pop. size	938,000	498,000	217,000	223,000

[a]As determined from Item 35 of the Teacher Questionnaire. Respondents were asked to check all types that applied.
[b]Analysis restricted to teachers with computers available.

Uses of Instructional Media (1982-83)

Instructional media are used primarily at the classroom level; consequently, most of the results reported in this section are based on estimates from teachers. Three major areas are considered: (1) overall use of instructional media, including the number of teachers/students involved and frequency of use; (2) nature and extent of use, including specific purposes of use, integration with other classroom activities, time spent, and arrangements for use; and (3) preferences, opinions, and attitudes regarding the use of instructional media.

A. OVERALL USE OF MEDIA (1982-83)

In 1982-83, all three of the specific instructional media types under consideration were used by more than half of the nation's teachers to whom they were available (see Table 37). Audio/radio was the most common medium teachers used (75 percent) and, as shown later, audiotapes and records appeared to be the most frequently used forms. Roughly the same percentages of teachers indicated using ITV and computers at the secondary school level; at the elementary school level, however, more teachers reported using computers (62 percent) than ITV (54 percent) with their classes. In general, however, use of all three media was proportionately higher among elementary school teachers than secondary teachers, probably reflecting the greater teacher specialization in secondary schools.

About four of ten teachers (42 percent) with ITV available used at least one ITV series regularly during the 1982-83 school year (see Table 38). Regular use of ITV—defined as using 75 percent or more of all lessons in the series—was proportionately higher among elementary school teachers (48 percent) than middle/junior (40 percent) or senior high teachers (28 percent).

Table 39 lists the 25 most highly used ITV series, according to teachers who used ITV (regularly or irregularly) in 1982-83. In all, 580 unique series were identified by teachers. More than 75,000

Table 37 PERCENTAGE OF TEACHERS USING INSTRUCTIONAL MEDIA, BY SCHOOL LEVEL, 1982-83[a]

Medium	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
Used ITV programming this year	54% (1,464,000)	56% (785,000)	51% (324,000)	51% (355,000)
Used audio/radio this year	75 (1,882,000)	79 (995,000)	74 (415,000)	67 (472,000)
Used computers this year	62 (938,000)	71 (498,000)	55 (217,000)	48 (223,000)

[a] As determined from Items 13, 30, and 39 of the Teacher Questionnaire.
[b] Analysis restricted to teachers with particular medium and equipment available.

NOTE: Numbers in parentheses represent the number of teachers nationally in each category with the particular medium available. For number of sample cases, see Appendix D.

Table 38 PERCENTAGE OF TEACHERS REPORTING REGULAR USE OF ITV SERIES, BY SCHOOL LEVEL, 1982-83[a]

Number of Series Used Regularly	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
No complete series used	58%	52%	60%	72%
One series	9	10	9	5
Two or more series	33	38	31	23
No. of sample cases	1,626	810	400	416
Est. pop. size	1,464,000	785,000	324,000	355,000

[a]As determined from Item 17 of the Teacher Questionnaire.
[b]Analysis restricted to teachers with ITV programming and equipment available.

Table 39 ESTIMATES OF TEACHERS AND STUDENTS USING MOST WIDELY USED ITV SERIES, 1982-83[a]

ITV series	Intended grade level(s)	Total no. of teachers using[b]	Percent of teachers using off-air[c]	Percent of teachers using as videotape[c]	No. of students viewing series
1. *Electric Company*	Primary, Interm.	104,000	65%	43%	3,455,000
2. *NOVA*	High Sch.	94,400	6	91	10,517,000
3. *National Geographic Specials*	High Sch.	77,500	5	82	7,456,000
4. *Inside Out*	Interm.	74,600	80	18	3,082,000
5. *All About You*	Primary	72,500	79	17	1,775,000
6. *Slim Goodbody*	Primary	69,000	81	21	1,720,000
7. *Read All About It*	Interm.	55,300	82	16	967,000
8. *Gather-Round*	Primary	55,000	72	30	2,002,000
9. *Mulligan Stew*	Interm.	46,400	79	21	1,332,000
10. *Thinkabout*	Interm.	46,000	54	49	1,748,000
11. *It Figures*	Interm.	44,600	95	5	982,000
12. *Stories of America*	Primary	42,200	95	5	861,000
13. *Sesame Street*	Pre Sch., Primary	34,400	85	11	857,000
14. *Book Bird*	Primary, Interm.	33,900	72	25	1,477,000
15. *Life on Earth*	High Sch.	32,900	5	95	2,555,000
16. *Shakespeare*	High Sch.	27,500	0	88	3,347,000
17. *Cover to Cover*	Interm.	25,300	51	49	2,777,000
18. *Storyhound*	Primary	25,000	41	59	2,787,000
19. *Zoo Zoo Zoo*	Primary	24,700	55	33	705,000
20. *After School Specials*	Interm.	24,200	6	90	2,128,000
21. *Truly American*	Primary	22,800	80	18	867,000
22. *Letter People*	Interm.	21,700	63	28	728,000
23. *COSMOS*	High Sch.	20,500	0	85	1,463,000
24. *3-2-1 Contact*	Interm.	18,600	72	28	551,000
25. *Assignment the World*	Interm.	18,500	77	23	767,000

[a]As determined from Item 18 of the Teacher Questionnaire.
[b]Standard errors of rare events tend to approach or even exceed the values of the estimates; consequently, to improve the stability of the estimates provided in this table, programs reported by fewer than 12 teachers or national estimates of teacher totals less than 18,500 were not reported.
[c]Only actual reports of use are considered, and no adjustment for nonresponse was made; consequently, these columns may total less than 100 percent. On the other hand, they may total more than 100 percent because of mode usage of particular series by teachers.

NOTE: These estimates are based on all the teachers who used ITV in 1982-83. No single series is aimed at all grade levels or even all curricula needs in a grade level; therefore, the number of teachers using a single series should be considered in relation to the total number of teachers at the appropriate grade level(s).

teachers used three series: *Electric Company, NOVA,* and *National Geographic Specials.* As Table 39 shows, the series most highly used by teachers tended to be targeted for the primary or elementary grades; however, the series viewed most were those intended for the middle/junior and high school grades in which one teacher may teach multiple sections of one course. Some programs were used almost exclusively as videotape recordings, reflecting a necessary accommodation of program broadcast time and instructional schedules, which appeared most frequently needed at the high school level.

Tables 40 and 41 present the trends in frequency of teachers' use of ITV and audio/radio, respectively, over the past three years by school level. Use trends were not assessed for computers, because the rapid growth of this technology in schools over the past three years is well known. Overall, use of both ITV and audio/radio increased slightly over the past three years, although the highest percentages of teachers (with media available) indicated using these media with "about the same" frequency in 1982-83 that they did in the past three years. However, about one third of the teachers indicated using ITV more frequently in 1982-83 than in the previous three years. A similar, but less dramatic increase was found for audio/radio. There were definite trends by school level, with ITV use increasing more in senior high schools. On the other hand, audio/radio use increased more in elementary schools than in senior high.

Table 40 PERCENTAGE OF TEACHERS REPORTING CHANGES IN FREQUENCY OF ITV USE IN THE PAST THREE YEARS, BY SCHOOL LEVEL, 1982-83[a]

		School Level		
Trends in ITV Use	Total[b]	Elementary	Middle/junior high school	Senior high school
A lot more	9%	7%	10%	13%
A little more	25	25	24	25
About the same	41	39	40	49
A little less	19	23	19	10
A lot less	6	6	7	3
No. of sample cases	862	460	188	214
Est. pop. size	791,000	442,000	166,000	183,000

[a]As determined from Item 27 of the Teacher Questionnaire.
[b]Analysis restricted to teachers who used ITV in 1982-83.

Table 41 PERCENTAGE OF TEACHERS REPORTING CHANGES IN FREQUENCY OF AUDIO/RADIO USE IN THE PAST THREE YEARS, BY SCHOOL LEVEL, 1982-83[a]

		School Level		
Trends in Audio/Radio Use	Total[b]	Elementary	Middle/junior high school	Senior high school
A lot more	9%	10%	5%	8%
A little more	19	20	21	14
About the same	57	55	59	58
A little less	12	10	12	16
A lot less	4	4	4	4
No. of sample cases	1,287	680	320	287
Est. pop. size	1,409,000	786,000	307,000	316,000

[a]As determined from Item 32 of the Teacher Questionnaire.
[b]Analysis restricted to teachers who used audio/radio in 1982-83.

B. NATURE AND EXTENT OF MEDIA USE (1982-83)

Almost half (47 percent) of the superintendents in districts with ITV available reported that some original ITV programs were produced within their districts. Tables 42 and 43 indicate that district production of original ITV programs was directly related to both district size and district wealth, as might be expected, with proportionately more of the largest and wealthiest districts undertaking such productions. Overall, the major uses of original district ITV productions were student-oriented: for production experience for students, for instruction, for student feedback of own performance. In most cases, uses of original ITV productions varied by size of the district (Table 44); however, no consistent relationship was found between the uses of such productions and district wealth (Table 45).

Principals with ITV available were also asked if their schools produced any original programs for school use. Table 46 shows that at the school level, middle/junior high (52 percent), and senior high (56 percent) schools were substantially more likely to undertake such original productions than elementary schools (29 percent). As was the case with district estimates, school uses of original TV productions were most commonly student-oriented (see Table 47).

ITV programming was available for a wide variety of academic areas and purposes. Teachers were asked to note the subjects for which they used ITV in 1982-83. Overall, and at each school level, science and social science were the areas most commonly indicated by teachers, followed closely by language arts (Table 48). In general, for those subject areas applicable to all three school levels, use was proportionately higher among elementary school teachers than among middle/junior high or senior high teachers.

Table 42 PERCENTAGE OF DISTRICTS REPORTING PRODUCTION OF ANY ORIGINAL ITV PROGRAMS, BY DISTRICT SIZE, 1982-83[a]

		Size of District				
Districts Producing Own ITV Program(s)	Total[b]	0-2,499	2,500-4,999	5,000-9,999	10,000-24,999	25,000 and over
Percentage of districts	47%	45%	47%	57%	43%	67%
No. of sample cases	489	113	86	92	91	107
Est. pop. size	10,600	6,900	1,900	1,000	600	200

[a] As determined from Item 10 of the Superintendent Questionnaire. Respondents were asked to check all categories that applied.
[b] Analysis restricted to superintendents of districts with ITV available.

Table 43 PERCENTAGE OF DISTRICTS REPORTING PRODUCTION OF ANY ORIGINAL ITV PROGRAM, BY DISTRICT WEALTH, 1982-83[a]

		Wealth of District			
Districts Producing Own ITV Program(s)	Total[b]	0-$1,900	$1,901-2,301	$2,302-2,736	$2,737 and over
Percentage of districts	47%	38%	40%	52%	59%
No. of sample cases	444	112	111	111	110
Est. pop. size	10,600	2,800	2,600	2,500	2,700

[a] As determined from Item 10 of the Superintendent Questionnaire. Respondents were asked to check all categories that applied.
[b] Analysis restricted to superintendents of districts with ITV available.

Table 44 PERCENTAGE OF DISTRICTS REPORTING ALL USES OF ORIGINAL ITV PRODUCTIONS, BY DISTRICT SIZE, 1982-83[a]

		Size of District				
Uses	Total[b]	0-2,499	2,500-4,999	5,000-9,999	10,000-24,999	25,000 and over
For instructional use	68%	64%	74%	72%	72%	89%
For administrative use	20	11	20	48	49	62
For in-service training	38	29	32	68	74	71
For production experience for students	73	71	79	68	85	79
For teacher feedback of own performance	44	39	48	53	56	65
For student feedback of own performance	52	46	66	62	55	54
No. of sample cases	283	51	41	55	55	81
Est. pop. size	5,000	3,140	900	570	260	130

[a]As determined from Item 10 of the Superintendent Questionnaire. Respondents were asked to check all uses that applied.
[b]Analysis restricted to superintendents of districts where original ITV programs are produced.

Table 45 PERCENTAGE OF DISTRICTS REPORTING ALL USES OF ORIGINAL ITV PRODUCTIONS, BY DISTRICT WEALTH, 1982-83[a]

		Wealth of District			
Uses	Total[b]	0-$1,900	$1,901-2,301	$2,302-2,736	$2,737 and over
For instructional use	68%	69%	87%	[illegible]%	67%
For administrative use	20	26	12	25	15
For in-service training	38	46	37	29	34
For production experience for students	73	63	67	82	74
For teacher feedback of own performance	44	44	42	47	37
For student feedback of own performance	52	56	48	50	49
No. of sample cases	257	52	63	67	75
Est. pop. size	5,000	1,060	1,040	1,300	1,600

[a]As determined from Item 10 of the Superintendent Questionnaire. Respondents were asked to check all uses that applied.
[b]Analysis restricted to superintendents of districts where original ITV programs are produced.

Table 46 PERCENTAGE OF SCHOOLS REPORTING PRODUCTION OF ANY ORIGINAL ITV PROGRAMS, BY SCHOOL LEVEL, 1982-83[a]

		School Level		
Schools Producing Own ITV Program(s)	Total[b]	Elementary	Middle/junior high school	Senior high school
Percentage of schools	36%	29%	52%	56%
No. of sample cases	1,022	502	248	272
Est. pop. size	76,000	54,000	12,300	9,700

[a]As determined from Item 13 of the Principal Questionnaire. Respondents were asked to check all categories that applied.
[b]Analysis restricted to principals of schools with ITV available.

Table 47 PERCENTAGE OF SCHOOLS REPORTING ALL USES OF ORIGINAL ITV PRODUCTIONS, BY SCHOOL LEVEL, 1982-83[a]

Uses	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
For instructional use	61%	56%	69%	66%
For administrative use	15	15	12	17
For in-service training	25	24	23	31
For production experience for students	57	50	69	63
For teacher feedback of own performance	34	36	30	32
For student feedback of own performance	57	52	60	69
No. of sample cases	459	173	135	151
Est. pop. size	27,700	15,900	6,400	5,400

[a]As determined from Item 13 of the Principal Questionnaire. Respondents were asked to check all uses that applied.
[b]Analysis restricted to principals of schools where original ITV programs are produced.

Table 48 PERCENTAGE OF TEACHERS REPORTING USING ITV FOR VARIOUS SUBJECTS, BY SCHOOL LEVEL, 1982-83[a]

Subject	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
Art	13%	20%	2%	4%
Career/vocational education	12	11	13	13
Computer science	4	2	7	4
English as a second language	2	2	0[c]	4
Foreign language	2	1	2	7
Guidance	8	9	10	3
Health/nutrition	29	42	12	12
Home economics	2	1	2	7
Industrial education	1	0[c]	1	3
Language arts, other than reading	35	42	28	25
Mathematics	20	29	11	5
Music	9	13	3	5
Physical education	6	8	4	6
Reading	30	43	18	9
Science	39	51	30	21
Social science	38	44	29	30
Special education	2	1	5	4
Other	14	11	18	19
No. of sample cases	879	466	196	217
Est. pop. size	791,000	442,000	166,000	183,000

[a]As determined from Item 14 of the Teacher Questionnaire. Respondents were asked to check all subjects that applied.
[b]Analysis restricted to teachers who used ITV in 1982-83.
[c]Represents a positive percentage less than .5.

Table 49 PERCENTAGE OF TEACHERS REPORTING ALL CLASSROOM ARRANGEMENTS FOR ITV USE, BY SCHOOL LEVEL, 1982-83[a]

Classroom Arrangement	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
Class views program with another class or classes	32%	38%	26%	23%
Entire class views program without other class(es)	84	81	85	88
Small group(s) from the class view program	11	9	13	12
Individual students are assigned to view programs	6	3	7	12
No. of sample cases	858	457	188	213
Est. pop. size	791,000	442,000	166,000	183,000

[a]As determined from Item 19 of the Principal Questionnaire. Respondents were asked to check all arrangements that applied.
[b]Analysis restricted to teachers who used ITV in 1982-83.

Table 51 TIME TYPICALLY SPENT BY TEACHERS DISCUSSING ITV LESSONS BEFORE CLASS VIEWS THEM, BY SCHOOL LEVEL, 1982-83[a]

Time Spent Preparing for ITV Lesson	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
None	10%	14%	1%	3%
1-5 mins.	28	36	15	8
6-10 mins.	23	23	35	11
11-15 mins.	17	18	16	16
More than 15 mins.	22	10	33	62
No. of sample cases	388	252	73	63
Est. pop. size	620,000	390,000	130,000	100,000

[a]As determined from Item 20 of the Teacher Questionnaire.
[b]Analysis restricted to teachers who used ITV regularly during 1982-83.

Table 52 TIME TYPICALLY SPENT BY TEACHERS DISCUSSING ITV LESSONS AFTER CLASS VIEWS THEM, BY SCHOOL LEVEL, 1982-83[a]

Time Spent Following Up on ITV Lesson	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
None	1%	1%	2%	2%
1-5 mins.	20	25	8	4
6-10 mins.	26	32	18	5
11-15 mins.	18	18	23	10
More than 15 mins.	36	24	50	80
No. of sample cases	395	258	74	63
Est. pop. size	620,000	390,000	130,000	100,000

[a]As determined from Item 21 of the Teacher Questionnaire.
[b]Analysis restricted to teachers who used ITV regularly during 1982-83.

Teachers can make multiple arrangements for student viewing in using ITV. Table 49 shows that more than four out of five teachers at all school levels arranged for their entire class to view ITV programs without other classes. Elementary school teachers (38 percent) were more likely to combine classes for ITV viewing than middle/junior high teachers (26 percent) or senior high teachers (23 percent). Assigning individual students to view programs was the least common procedure employed by teachers, and such arrangements were confined primarily to the secondary school levels.

Classroom teachers who used ITV generally attempted to integrate program viewing into the overall curriculum and instructional process. Table 50 shows that virtually all teachers who used ITV regularly in 1982-83 combined program viewing with at least some preparatory or follow-up discussion. This was true regardless of school level, although teachers at the middle/junior high and senior high levels typically spent considerably more time discussing ITV lessons both before and after classes viewed them than did elementary school teachers (Tables 51 through 53).

Table 50 TIME TYPICALLY SPENT BY TEACHERS DISCUSSING ITV LESSONS BEFORE AND AFTER PROGRAM VIEWING, 1982-83[a]

Time Spent	Preparing for ITV lesson[b]	Following up on ITV lesson[b]
None	10%	1%
1-5 mins.	28	20
6-10 mins.	23	26
11-15 mins.	17	18
More than 15 mins.	22	36
No. of sample cases	388	395
Est. pop. size	620,000	620,000

[a]As determined from Items 20 and 21 of the Teacher Questionnaire.
[b]Analysis restricted to teachers who used ITV regularly during 1982-83.

Teachers who used ITV were also asked to indicate the frequency with which classroom assignments were related to the ITV programs. As shown in Table 54, about three out of four teachers at all school levels indicated that assignments were related to ITV programs at least some of the time. The use of teacher guides, however, requires their distribution. About one third of the teachers reported that guides are not distributed in their schools. Further, about 70 percent of those teachers who had ITV guides distributed at their schools reported that they used suggestions from these guides in presenting ITV programming to their classes (Table 55).

Computers (microcomputers and terminals connected to central processors) can be used for a variety of instructional purposes. Principals of schools with computers available were asked to note all the educational purposes for which computers were employed in their schools. Instruction in computer literacy and learning enrichment in specific subject areas emerged as the two educational uses most consistently mentioned by principals (Table 56). Challenge use for high achievers and remedial instruction for regular students also were widespread uses, especially among elementary schools. Instruction in computer literacy, computer applications, and computer programming were cited far more often in secondary schools than in elementary schools. Principals were also asked to select the most frequent instructional use of computers. The one they cited most frequently was computer literacy (Table 57). These school-level estimates of instructional computer use are quite consistent with classroom use as determined from teachers who used computers in 1982-83 (Table 58).

Table 53 AVERAGE NUMBER OF MINUTES SPENT BY TEACHERS DISCUSSING ITV LESSONS BEFORE AND AFTER CLASS VIEWS THEM, BY SCHOOL LEVEL, 1982-83[a]

Average Time Spent by Teachers	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
No. of minutes preparing for ITV lesson	17	11	20	28
No. of minutes following up on ITV lessons	22	16	24	34
Est. pop. size	791,000	442,000	166,000	183,000

[a]As determined from Items 20 and 21 of the Teacher Questionnaire.
[b]Analysis restricted to teachers who used ITV in 1982-83.
NOTE: For number of sample cases, see Appendix D.

Table 54 CLASSROOM ASSIGNMENTS RELATED TO ITV PROGRAMS, BY SCHOOL LEVEL, 1982-83[a]

Frequency	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
Always	7%	3%	11%	14%
Most of the time	18	18	20	18
Some of the time	47	50	47	43
Seldom	23	25	17	23
Never	5	5	5	3
No. of sample cases	857	456	188	213
Est. pop. size	791,000	442,000	166,000	183,000

[a]As determined from Item 24 of the Teacher Questionnaire.
[b]Analysis restricted to teachers who used ITV in 1982-83.

Table 55 PERCENTAGE OF TEACHERS USING ITV GUIDES, BY SCHOOL LEVEL, 1982-83[a]

Teachers Using ITV Guides	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
Percentage of teachers	70%	72%	68%	69%
No. of sample cases	580	344	121	115
Est. pop. size	535,000	317,500	112,000	106,000

[a]As determined from Item 23 of the Teacher Questionnaire.
[b]Analysis restricted to teachers who used ITV and had guides distributed in 1982-83.

Table 56 PERCENTAGE OF PRINCIPALS REPORTING VARIOUS INSTRUCTIONAL USES OF COMPUTERS, BY SCHOOL LEVEL, 1982-83[a]

Computer Uses	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
Remedial instruction for regular classroom students	57%	61%	60%	40%
Regular instruction in specific subject areas for all students	42	43	37	48
Enrichment in specific subject areas	67	69	62	63
Challenge use for high achievers	62	66	57	55
Computer literacy (e.g., introduction to computer concepts)	68	64	66	84
Computer applications (e.g., word processing or advanced problem solving)	28	17	32	63
Computer programming	43	30	50	79
Instruction for special education students	32	32	38	25
Bilingual instruction	2	2	4	3
Other	8	8	7	8
No. of sample cases	833	338	224	271
Est. pop. size	63,000	41,500	11,700	9,800

[a]As determined from Item 26 of the Principal Questionnaire. Respondents could cite only one use.
[b]Analysis restricted to principals of schools with computers available.

Table 57 PRINCIPALS' ESTIMATES OF THE MOST FREQUENT INSTRUCTIONAL USE OF COMPUTERS, BY SCHOOL LEVEL, 1982-83[a]

Most Frequent Computer Use	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
Remedial instruction for regular classroom students	10%	12%	11%	4%
Regular instruction in specific subject areas for all students	16	16	14	15
Enrichment in specific subject areas	16	19	13	8
Challenge use for high achievers	9	9	12	4
Computer literacy (e.g., introduction to computer concepts)	32	30	34	37
Computer applications (e.g., word processing or advanced problem solving)	3	2	4	5
Computer programming	8	3	8	26
Instruction for special education students	3	4	1	0[c]
Bilingual instruction	0[c]	0[c]	0[c]	0[c]
Other	4	5	3	1
No. of sample cases	728	298	194	236
Est. pop. size	63,000	41,500	11,700	9,800

[a]As determined from Item 26 of the Principal Questionnaire. Respondents could cite only one use.
[b]Analysis restricted to principals of schools with computers available.
[c]Represents a positive percentage less than 0.5.

Table 58 PERCENTAGE OF TEACHERS REPORTING ALL INSTRUCTIONAL USES OF COMPUTERS, BY SCHOOL LEVEL, 1982-83[a]

Computer Uses	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
Remedial instruction for regular classroom students	43%	46%	47%	26%
Regular instruction in specific subject areas for all students	43	45	46	34
Enrichment in specific subject areas	59	65	57	40
Challenge use for high achievers	47	55	45	23
Computer literacy (e.g., introduction to computer concepts)	46	43	54	45
Computer applications (e.g., word processing or advanced problem solving)	19	15	20	34
Computer programming	25	17	36	39
Instruction for special education students	13	13	20	5
Bilingual instruction	1	1	2	2
Other	7	5	7	16
No. of sample cases	481	291	110	80
Est. pop. size	580,000	354,000	119,000	107,000

[a]As determined from Item 40 of the Teacher Questionnaire. Respondents were asked to check all uses that applied.
[b]Analysis restricted to teachers who used computers in 1982-83.

Table 59 TEACHERS' MOST PREFERRED TYPE OF ITV PROGRAMMING, BY SCHOOL LEVEL, 1982-83[a]

Type of Programming	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
Full-semester or year-long series	29%	46%	8%	8%
Mini-series	21	19	29	18
Selected programs from series	50	35	62	74
No. of sample cases	866	458	196	212
Est. pop. size	791,000	442,000	166,000	183,000

[a]As determined from Item 16 of the Teacher Questionnaire.
[b]Analysis restricted to teachers who used ITV in 1982-83.

Table 60 TEACHERS' CHOICE OF THE ONE SUBJECT IN WHICH NEW ITV PROGRAMMING IS MOST NEEDED BY SCHOOL LEVEL, 1982-83[a]

Subject Area	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
Art	1%	2%	0[c]	1%
Career/vocational education	4	1	4	8
Computer science	9	11	9	5
English as a second language	2	1	2	4
Foreign language	3	2	0[c]	5
Guidance	2	3	3	0[c]
Health/nutrition	5	6	4	3
Home economics	1	0	0	2
Industrial education	1	0[c]	1	2
Language arts, other than reading	14	13	17	15
Mathematics	10	11	10	6
Music	3	4	0	3
Physical education	1	1	4	1
Reading	11	15	8	4
Science	12	14	10	10
Social science	13	11	13	15
Special education	2	1	4	2
Other	7	3	9	13
No. of sample cases	665	343	147	175
Est. pop. size	791,000	442,000	166,000	183,000

[a]As determined from Item 15 of the Teacher Questionnaire.
[b]Analysis restricted to teachers who used ITV in 1982-83.
[c]Represents a positive percentage less than 0.5.

C. ATTITUDES AND OPINIONS

Because perceptions (whether or not based in fact) can be important determinants of planned and actual use of media, several areas of attitudes and opinions were assessed. For ITV, program type preferences, perceived programming needs, and perceived student consequences were examined.

Teachers who used ITV with their classes were asked to indicate the type of ITV programming that they most preferred. As shown in Table 59, the type of programming most preferred by teachers differed by school level. About three of four senior high school teachers preferred to use selected programs from series, compared to 62 percent of middle/junior high teachers and 35 percent of elementary school teachers. On the other hand, almost half (46 percent) of the elementary school teachers chose full semester or year-long series as the preferred type of programming, as opposed to only 8 percent of the middle/junior high and senior high teachers.

Teachers were asked to choose the one subject area in which new ITV programming was most needed. Table 60 shows that both elementary and secondary school teachers perceived the major areas of need to be language arts other than reading, mathematics, science, and social science. Elementary school teachers also cited a strong need for reading programs. It should be noted that the areas in which the need for programming was considered greatest corresponded closely to the

areas with the greatest reported frequency of use (Table 48 above). Table 61 shows the percentages of teachers reporting specific effects on students of ITV use. In general, their perceptions of outcomes were favorable with three of four teachers indicating enhanced student comprehension of ideas and discussion of ITV program content. Almost half of the teachers reported that their students learned more when using ITV, and about two teachers in five saw ITV as a student-preferred medium that expanded vocabulary, stimulated follow-up ideas, and generally facilitated enthusiasm for school work.

Table 61 PERCENTAGE OF TEACHERS REPORTING ALL OUTCOMES OF CLASSROOM USE OF ITV, 1982-83[a]

Outcome	Teachers[b]
Students learn more when I use ITV	45%
Students comprehend and discuss content and ideas presented in ITV	75
Students use new vocabulary included in ITV	37
Student have followed up ideas mentioned in ITV	41
Students are more enthusiastic about school work in general	36
Students use library more	15
Students watch more educational television at home	28
Students prefer ITV over other classroom media	39
Other	6
No. of sample cases	835
Est. pop. size	791,000

[a]As determined from Item 26 of the Teacher Questionnaire. Respondents were asked to check all categories that applied.
[b]Analysis restricted to teachers who used ITV in 1982-83.

When principals were polled for their reactions to computers, the majority denied feeling uncomfortable about working with the machines. Further, more than 90 percent disagreed with the statement that the emphasis on computers detracts from the overall educational goals of the schools. On the other hand, principals were equally definite in response to statements of need. The overwhelming majority indicated agreement with statements suggesting that principals and teachers need help in planning for, or dealing with, the demands brought about by this new technology. Almost all principals (95 percent) believed that their teachers wanted more training in computers. Although hardware selection is difficult for about 60 percent, software acquisition is a problem for 90 percent or more. Finally, and perhaps most important, three of four principals thought that the present computer-to-student ratio was too small to allow significant instructional use of this technology.

Teachers' attitudes toward computers were also assessed in this survey. As shown in Table 63, about 82 percent believed that computers could help teachers to be more effective. Apprehension about computer use and difficulty with hardware seem to be less problematic at this time than ambivalence about software quality and integrating computer time with other subject areas. However, only 13 percent of all teachers agreed that having one or two students work with computers was seriously disruptive to the total class. Consistent with the principals' opinions, about 90 percent of the teachers indicated that they wanted more training in computers.

Table 62 PRINCIPALS' ATTITUDES TOWARD COMPUTERS, 1982-83[a,b]

Value Statement	Strongly agree	Agree	Disagree	Strongly disagree	No opinion
Selection of appropriate hardware is difficult	14%	47%	27%	8%	5%
Schools need help in planning for the changing role of teachers which is being brought about by the new electronic learning media	44	51	3	0[c]	1
I do not feel comfortable about working with computers	6	18	45	28	3
The software available to my building is quite good instructionally	7	50	21	9	14
My teachers want more training in computers	32	62	4	0[c]	2
Principals need help in software acquisition (finding best prices, determing what the product will do)	41	51	5	0[c]	3
The emphasis on computers is detracting seriously from the overall educational goals of the schools	2	3	51	41	3
The present computer-to-student ratio precludes significant instructional use of computers	24	51	15	4	7

[a]As determined from Item 28 of the Teacher Questionnaire.
[b]Analysis restricted to teachers who used ITV in 1982-83.
[c]Represents a positive percentage less than 0.5.
NOTE: For number of sample cases, see Appendix D.

Table 63 TEACHERS' ATTITUDES TOWARD COMPUTERS, 1982-83[a,b]

Value Statement	Strongly agree	Agree	Disagree	Strongly disagree	No opinion
Computers can help teachers teach more effectively	28%	54%	4%	0%[c]	13%
Having one or two students work at a computer is seriously disruptive to the rest of my classroom activity	2	11	40	23	24
I want more training in computers	46	44	3	1	7
The software available to me is quite good instructionally	5	30	10	7	49
I do not feel comfortable about working with computers	8	23	31	20	18
Previewing software should be done by teachers before purchase	46	44	1	1	9
Integrating computer time with other subject areas is a fairly simple matter	4	28	25	8	34
The hardware, or equipment, is difficult to use	1	7	37	14	41

[a] As determined from Item 42 of the Teacher Questionnaire.
[b] Analysis restricted to teachers who used ITV in 1982-83.
[c] Represents a positive percentage less than 0.5.

NOTE: For number of sample cases, see Appendix D.

Support for Instructional Media (1982-83)

This section examines four aspects of support for instructional media: (1) financial support, including trends in financial support and sources of funding for media; (2) designation of support personnel, including the type and number of support staff, responsibilities, and services provided; (3) training, including the availability of workshops, agencies providing training, types and sources of training by principals and teachers; and (4) district and school policy on media use.

A. FINANCIAL SUPPORT

Meaningful examination of financial support for instructional media is difficult because much of this information is kept at the district level and districts vary greatly in both size and wealth. Furthermore, budgets for instructional media are frequently "buried" in several budgetary line items, and many superintendents reported difficulty in "teasing out" this information. Nonetheless, some data from superintendents on "total media budgets (excluding textbooks)" were available. The budgets reported ranged quite widely (from very few dollars to almost $1 million), and the average and median total budgets for all districts were about $58,000 and $50,000, respectively. Table 64 presents the percentage distribution of the total budget across the various media. On the average, almost half (45 percent) of the total district media budget in 1982-83 was allocated to computers, reflecting the

Table 64 DISTRIBUTION OF TOTAL DISTRICT MEDIA BUDGET, 1982-83[a,b]

Medium	Percent of total media budget
ITV	15%
Audio/radio	7
Computers	45
Other media	33
No. of sample cases	390
Est. pop. size	11,500

[a]As determined from Item 20 of the Superintendent Questionnaire.
[b]Analysis based on all superintendents.

Table 65 DIRECTION OF DISTRICT PER CAPITA FINANCIAL SUPPORT FOR VARIOUS MEDIA BETWEEN 1980 AND 1983[a]

Direction of support	ITV[b]	Audio/radio[b]	Computers[b]	Other media[b]
Increased	42%	18%	92%	21%
Remained the same	41	59	4	57
Decreased	12	17	3	14
Don't know	4	6	1	7
No. of sample cases	466	409	488	434
Est. pop. size	10,600	9,900	10,800	11,500

[a]As determined from Item 21 of the Superintendent Questionnaire.
[b]Analysis restricted to superintendents of districts with the medium available.

rapid growth and acquisition of new equipment for this newest technology in our nation's schools. About one third of the budget was reserved for "other media," whereas ITV and audio/radio received 15 percent and 7 percent, respectively.

More than 92 percent of the superintendents reported that per capita financial support for computers had increased over the past three years (Table 65); about 42 percent indicated increased district support for ITV over the past three years, whereas about 12 percent indicated that support had decreased. Only about two in ten superintendents reported that district support for audio/radio or for other media had increased over the past three years. No consistent relationship was observed between district size or wealth and three-year trends of per capita financial support.

Funding for media and equipment can come from various sources; consequently, superintendents were asked to indicate for each medium the percentage of total equipment funds contributed by each of the major funding agencies. According to superintendents' estimates, the major source of equipment funds for computers was federal programs, whereas district-wide budgets (also a substantial contributor to computer equipment) were the major source of equipment funds for the other forms of instructional media (Table 66). These estimates were consistent with those provided by school principals (Table 67), although principals estimated that school building budgets contributed substantially higher proportions of the total equipment funds for each medium than did superintendents.

B. SUPPORT PERSONNEL

Of those districts with available computers and ITV programming, almost two thirds (64 percent) had designated someone with district-wide responsibility for computers, and half had someone with such responsibility for ITV (Table 68). Two of three districts with coordinators for both media (42 percent) reported that different persons coordinated ITV and

Table 66 DISTRICT SOURCES OF EQUIPMENT FUNDS FOR INSTRUCTIONAL MEDIA, 1982-83[a]

	Type of Medium[b]			
Source of Funds	ITV	Audio/radio	Computers	Other media
Federal programs	22%	9%	44%	11%
State programs	10	7	10	6
District-wide budget	53	65	36	59
School building budgets	13	16	8	20
Other	2	3	2	4
No. of sample cases	395	323	437	371
Est. pop. size	11,500	11,500	11,500	11,500

[a]As determined from Item 22 of the Superintendent Questionnaire.
[b]Analysis based on all superintendents.

Table 67 SCHOOL SOURCES OF EQUIPMENT FUNDS FOR INSTRUCTIONAL MEDIA, 1982-83[a]

	Type of Medium[b]			
Source of Funds	ITV	Audio/radio	Computers	Other media
Federal programs	18%	11%	31%	13%
State programs	10	8	10	9
District-wide budget	39	39	28	40
School building budgets	30	39	22	34
Other	3	3	9	4
No. of sample cases	805	729	844	750
Est. pop. size	81,000	81,000	81,000	81,000

[a]As determined from Item 37 of the Principal Questionnaire.
[b]Analysis based on all principals.

Table 68 PERCENTAGE OF DISTRICTS WITH MEDIA COORDINATORS, BY DISTRICT SIZE, 1982-83[a]

		Size of District				
Type of Coordinator(s)	Total[b]	0-2,499	2,500-4,999	5,000-9,999	10,000-24,999	25,000 and over
No ITV or computer coordinator	28%	29%	30%	18%	34%	11%
ITV coordinator only	8	6	11	10	14	21
Computer coordinator only	22	25	22	15	8	16
Same coordinator for ITV and computers	14	12	17	16	14	7
Different coordinators for ITV and computers	28	28	20	41	30	44
No. of sample cases	400	91	72	78	71	88
Est. pop. size	10,300	6,700	1,900	900	600	200

[a]As determined from Items 25, 28, and 29 of the Superintendent Questionnaire.
[b]Analysis restricted to superintendents of districts with ITV and computers available.

Table 69 AVERAGE PERCENTAGE OF TIME DEVOTED TO DISTRICT-WIDE MEDIA COORDINATION, BY DISTRICT SIZE, 1982-83[a]

Media Coordination	Total	Size of District				
		0-2,499	2,500-4,999	5,000-9,999	10,000-24,999	25,000 and over
Percentage of time devoted to coordinating ITV[b]	20%	15%	25%	30%	22%	12%
Percentage of time devoted to coordinating computers[c]	20	18	18	29	32	41

[a]As determined from Items 26 and 30 of the Superintendent Questionnaire.
[b]Analysis restricted to superintendents with district-wide ITV coordinator present.
[c]Analysis restricted to superintendents with district-wide computer coordinator present.
NOTE: For number of sample cases, see Appendix D.

Table 70 AVERAGE NUMBER OF OTHER DISTRICT MEDIA COORDINATION STAFF, BY DISTRICT SIZE, 1982-83[a]

Media Staff	Total	Size of District				
		0-2,499	2,500-4,999	5,000-9,999	10,000-24,999	25,000 and over
Average number of other ITV staff[b]	1.33	1.32	1.14	0.85	2.34	2.39
Average number of other computer staff[c]	0.78	0.66	0.67	1.19	1.10	2.55

[a]As determined from Items 27 and 31 of the Superintendent Questionnaire.
[b]Analysis restricted to superintendents with district-wide ITV coordinator present.
[c]Analysis restricted to superintendents with district-wide computer coordinator present.
NOTE: For number of sample cases, see Appendix D.

Table 71 PERCENTAGE OF SCHOOLS WITH BUILDING-LEVEL ITV COORDINATORS, BY SCHOOL LEVEL, 1982-83[a]

Schools with Building ITV Coordinator	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
Percentage of schools	55%	51%	61%	70%
No. of sample cases	1,037	515	255	267
Est. pop. size	76,000	54,000	12,300	9,700

[a]As determined from Item 29 of the Principal Questionnaire.
[b]Analysis restricted to principals of schools with ITV available.

Table 72 PERCENTAGE OF SCHOOLS WITH BUILDING ITV COORDINATOR TRAINED IN MEDIA, BY SCHOOL LEVEL, 1982-83[a]

School ITV Coordinator Trained in Media	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
Percentage of schools	79%	75%	85%	91%
No. of sample cases	669	310	164	195
Est. pop. size	41,800	27,500	7,500	6,800

[a]As determined from Item 30 of the Principal Questionnaire.
[b]Analysis restricted to principals with building-level ITV coordinator available.

Table 73 PERCENTAGE OF SCHOOLS REPORTING ALL SERVICES PROVIDED BY BUILDING-LEVEL ITV COORDINATOR, BY SCHOOL LEVEL, 1982-83[a]

Types of Services	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
Distributes teacher guides	79%	82%	73%	75%
Provides newsletters or other information	48	48	44	56
Calls attention to special programs	77	75	78	81
Provides assistance with equipment	90	87	93	98
Provides training/ consultation	51	43	63	68
Works with subgroups of students	49	44	56	59
Records programs for teachers upon request	66	57	83	82
No. of sample cases	667	307	165	195
Est. pop. size	41,800	27,500	7,500	6,800

[a]As determined from Item 32 of the Principal Questionnaire. Respondents were asked to check all services that applied.
[b]Analysis restricted to principals with building-level coordinator available.

Table 74 PERCENTAGE OF SCHOOLS REPORTING OTHER RESPONSIBILITIES OF BUILDING-LEVEL ITV COORDINATOR, BY SCHOOL LEVEL, 1982-83[a]

Responsibilities	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
None	1%	1%	1%	1%
Administrative	12	15	5	8
Teaching	32	34	34	21
Library	67	67	63	71
Audio/radio	24	20	26	36
Computers	17	18	19	11
Other media	34	32	36	44
Other responsibility	5	4	5	6
No. of sample cases	674	312	167	95
Est. pop. size	41,800	27,500	7,500	6,800

[a]As determined from Item 31 of the Principal Questionnaire. Respondents were asked to check all categories that applied.
[b]Analysis restricted to principals with building-level ITV coordinator available.

Table 75 PERCENTAGE OF SCHOOLS WITH BUILDING-LEVEL COMPUTER COORDINATOR, BY SCHOOL LEVEL, 1982-83[a]

Schools with Building Computer Coordinator	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
Percentage of schools	77%	80%	76%	67%
No. of sample cases	829	339	226	264
Est. pop. size	63,000	41,500	11,700	9,800

[a]As determined from Item 20 of the Principal Questionnaire.
[b]Analysis restricted to principals of schools with computers currently available.

computers, whereas the remaining third indicated that one person coordinated both media. About 22 percent of the districts with both computers and ITV available had a computer coordinator only, whereas about 8 percent of these districts had an ITV coordinator only. Large districts were proportionately more likely than small districts to have either an ITV or a computer coordinator and were considerably more likely to have a separate coordinator for each medium.

Overall, the percentage of time devoted to district-wide media coordination was about the same (20 percent) for ITV and computers, although time spent was directly related to district size, with coordinators in large districts devoting about twice this time to media activities (Table 69). The number of other district-level media staff was also related to district size, with the largest districts reporting more than two other support staff members for ITV and computers (Table 70).

At the school building level, about 55 percent of the principals with ITV available reported that they had a person responsible for coordinating ITV, ranging from about 51 percent of the elementary schools to 70 percent of the senior high schools (Table 71). As Table 72 shows, this person typically (79 percent of all schools) had training in media, particularly in senior high schools (91 percent). The job of the building-level ITV coordinator typically involved providing assistance with equipment, distributing teacher guides, alerting teachers to special programs, and a number of other services (Table 73).

Virtually all building-level ITV coordinators had other responsibilities in the school (Table 74). About two thirds of the principals reported that the building ITV coordinator was also responsible for the school library. In about one third of the schools, the ITV coordinator was also responsible for other media; however, less than 20 percent of the principals reported that the ITV coordinator's responsibilities included computers.

Three of four (77 percent) principals with computers available in their schools reported having a person responsible for coordinating computer use in the school (Table 75). In contrast to ITV, however,

proportionately more principals of elementary schools (80 percent) than senior high schools (67 percent) indicated the presence of a building-level computer coordinator. As shown in Table 76, in about one third of the elementary schools with computer coordinators, the same person was also responsible for coordinating ITV, whereas in senior high schools this was much less likely to be the case (10 percent).

According to school principals, the building computer coordinator was even more likely than the ITV coordinator to have had training in use of the medium. Again, this was more likely to be the case in secondary schools (89 percent) than in elementary schools (80 percent), as shown in Table 77. Although the primary function of the building computer coordinator, like the ITV coordinator, involved providing assistance with the equipment, the computer coordinator also typically provided other related services to teachers (Table 78) such as calling attention to available software and other resources.

In contrast to the ITV coordinator, whose responsibilities also typically included the school library, most principals (especially at the senior high level) reported that the building-level computer coordinator also had teaching responsibility (Table 79). Further, it appears that proportionately fewer computer coordinators than ITV coordinators had responsibility for audio/radio or other media in their schools. This was especially true at the senior high school level.

Several other support activities involving school and nonschool personnel are available to principals to help facilitate or improve the use of computers for instruction. Principals with computers available were asked if they were currently using (Table 80) or planning to initiate (Table 81) such activities in their schools. At all school levels, about two thirds of the principals with computers indicated that they were currently providing in-service teacher training on computer use and

Table 76 PERCENTAGE OF SCHOOLS REPORTING THAT THE BUILDING-LEVEL COMPUTER COORDINATOR IS ALSO RESPONSIBLE FOR ITV, BY SCHOOL LEVEL, 1982-83[a]

ITV Responsibility	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
Computer coordinator and ITV coordinator are different persons	47%	35%	60%	77%
Computer coordinator and ITV coordinator are same person	30	33	29	10
There is no ITV coordinator	24	32	11	13
No. of sample cases	605	263	166	176
Est. pop. size	48,500	33,100	8,900	6,500

[a]As determined from Item 24 of the Principal Questionnaire.
[b]Analysis restricted to principals with building-level computer coordinator available.

Table 77 PERCENTAGE OF SCHOOLS WITH BUILDING-LEVEL COMPUTER COORDINATOR TRAINED IN COMPUTER USE, BY SCHOOL LEVEL, 1982-83[a]

School Computer Coordinator Trained in Computer Use	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
Percentage of schools	83%	80%	89%	89%
No. of sample cases	600	257	168	175
Est. pop. size	48,500	33,100	8,900	6,500

[a]As determined from Item 22 of the Principal Questionnaire.
[b]Analysis restricted to principals with building-level computer coordinators available.

Table 78 PERCENTAGE OF TEACHERS REPORTING ALL SERVICES PROVIDED BY BUILDING-LEVEL COMPUTER COORDINATOR, BY SCHOOL LEVEL, 1982-83[a]

Types of Services	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
Provides assistance with equipment	88%	87%	92%	88%
Provides training/ consultation	73	74	75	71
Works with subgroups of students	67	65	70	67
Calls attention to available software	62	64	67	53
Calls attention to resources (workshops, printed material, etc.)	59	61	61	55
No. of sample cases	729	368	189	172
Est. pop. size	795,000	408,000	191,000	196,000

[a]As determined from Item 38 of the Teacher Questionnaire. Respondents were asked to check all services that applied.
[b]Analysis restricted to teachers with building-level computer coordinator available.

another 20 percent reported that they were planning to initiate such training for teachers. (The topic of training in media is discussed more fully in the following subsection.)

About 40 percent of the schools with computers had designated a group to select computer programs and materials, and another 23 percent planned to establish such a group in the near future. Similar numbers of schools employed (38 percent) or planned to initiate (16 percent) a teacher resource support group to provide technical assistance to other teachers. Current use of the other options was less frequent overall, and was more likely to be concentrated at a particular school level: senior high schools were almost three times as likely (25 percent) as elementary schools (9 percent) to designate a group to write instructional programs, whereas elementary schools were much more likely (17 percent) than senior high schools (2 percent) to use volunteer parent groups.

Table 79 PERCENTAGE OF SCHOOLS REPORTING OTHER RESPONSIBILITIES OF BUILDING-LEVEL COMPUTER COORDINATOR, BY SCHOOL LEVEL, 1982-83[a]

		School Level		
Responsibilities	Total[b]	Elementary	Middle/junior high school	Senior high school
None	2%	2%	0%	2%
Administrative	23	28	15	13
Teaching	59	50	69	79
Library	26	30	23	11
Audio/radio	10	13	9	3
Other media	17	21	14	6
Other responsibility	11	12	6	10
No. of sample cases	602	258	169	175
Est. pop. size	48,500	33,100	8,900	6,500

[a] As determined from Item 23 of the Principal Questionnaire. Respondents were asked to check all categories that applied.
[b] Analysis restricted to principals with building-level computer coordinator available.

Table 80 PERCENTAGE OF SCHOOLS REPORTING ALL METHODS CURRENTLY USED TO FACILITATE COMPUTER INSTRUCTION, BY SCHOOL LEVEL, 1982-83[a]

		School Level		
Methods Used	Total[b]	Elementary	Middle/junior high school	Senior high school
A group designated to select instructional computer programs/materials	40%	40%	37%	46%
A group designated to write instructional computer programs/materials	13	9	16	25
A resource support group of teachers to provide technical or instructional assistance to other teachers	38	35	44	39
Volunteer parent group to assist teachers and students	11	17	4	2
In-service teacher training	67	69	65	62
Other	5	5	3	4
No. of sample cases	[illegible]	323	213	252
Est. pop. size	33,000	21,500	11,700	9,800

[a] As determined from Item 27 of the Principal Questionnaire. Respondents were asked to check all methods that applied.
[b] Analysis restricted to principals of schools with computers available.

Table 81 PERCENTAGE OF SCHOOLS PLANNING TO INITIATE ALL METHODS TO FACILITATE COMPUTER INSTRUCTION, BY SCHOOL LEVEL, 1982-83[a]

Methods Planned	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
A group designated to select instructional computer programs/materials	23%	23%	27%	22%
A group designated to write instructional computer programs/materials	16	16	20	15
A resource support group of teachers to provide technical or instructional assistance to other teachers	16	14	19	19
Volunteer parent group to assist teachers and students	12	14	10	6
In-service teacher training	20	18	25	23
Other	2	2	2	1
No. of sample cases	788	323	213	252
Est. pop. size	63,000	41,500	11,700	9,800

[a]As determined from Item 27 of the Principal Questionnaire. Respondents were asked to check all methods that applied.
[b]Analysis restricted to principals of schools with computers available.

Table 82 PERCENTAGE OF DISTRICTS REPORTING AVAILABILITY OF ALL TEACHER IN-SERVICE WORKSHOPS, BY DISTRICT SIZE, 1982-83[a]

Availability of Workshops	Total	Size of District				
		0-2,499	2,500-4,999	5,000-9,999	10,000-24,999	25,000 and over
No[b]	9%	10%	5%	5%	15%	2%
Yes, on the use of ITV[c]	50	43	60	65	56	75
Yes, on the use of audio/radio[c]	27	24	31	40	37	38
Yes, on the use of computers[c]	84	81	87	96	84	95
Yes, on the use of other media[c]	39	33	42	60	55	68

[a]As determined from Item 23 of the Superintendent Questionnaire. Respondents were asked to check all categories that applied.
[b]Analysis based on all superintendents.
[c]Analysis based on superintendents of districts with medium available.

NOTE: For number of sample cases, see Appendix D.

Table 83 PERCENTAGE OF DISTRICTS INDICATING ALL AGENCIES RESPONSIBLE FOR CONDUCTING TEACHER IN-SERVICE WORKSHOPS, BY TYPE OF MEDIUM, 1982-83[a]

Agency	Type of Medium[b]			
	ITV	Audio/radio	Computers	Other media
State Department of Education	35%	36%	29%	34%
School district	58	57	64	59
School building	22	24	20	26
Public TV station or network	29	10	2	3
University or college	18	22	33	22
Other	23	16	35	20
No. of sample cases	305	136	449	252
Est. pop. size	5,300	2,700	9,100	4,500

[a]As determined from Item 24 of the Superintendent Questionnaire. Respondents were asked to check all categories that applied.
[b]Analysis restricted to superintendents of districts that make in-service workshops on the use of particular media available to teachers.

Table 84 PERCENTAGE OF PRINCIPALS REPORTING ANY TRAINING IN MEDIA, BY TYPE OF MEDIUM AND SCHOOL LEVEL, 1982-83[a]

Medium	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
ITV	42%	44%	36%	38%
Audio/radio	41	42	35	41
Computers	54	52	61	57
Other media	49	50	48	43
None of the above	23	24	21	20
No. of sample cases	1,098	549	269	280
Est. pop. size	81,000	58,000	13,000	10,000

[a]As determined from Item 34 of the Principal Questionnaire. Respondents were asked to check all categories that applied.
[b]Analysis based on all principals.

Table 85 PERCENTAGE OF PRINCIPALS RECEIVING TRAINING IN MEDIA WITHIN LAST THREE YEARS, BY SCHOOL LEVEL, 1982-83[a]

Medium	Total[b]	School Level		
		Elementary	Middle/junior high school	Senior high school
ITV	44%	42%	47%	54%
Audio/radio	18	15	25	35
Computers	95	96	92	95
Other media	33	29	33	60

[a]As determined from Item 36 of the Principal Questionnaire.
[b]Analysis restricted to principals with training in particular medium.
NOTE: For number of sample cases, see Appendix D.

C. TRAINING AND INSTRUCTIONAL MEDIA (1982-83)

About 90 percent of all school districts made available to their teachers in-service workshops on the use of one instructional medium or more (Table 82). In districts with computers available, 84 percent offered in-service training in the computer use; about 50 percent of districts with ITV available offered such training in ITV use. About 39 percent of the districts provided in-service workshops for "other media," whereas only about one in four districts offered such training in audio/radio. In all cases, the percentage of districts offering in-service teacher workshops in media use was directly related to district size, with proportionately more of the large districts providing such workshops. More than half the superintendents reported that school district personnel conducted teacher in-service workshops for each medium (Table 83). For each medium, about one third of the superintendents indicated that the State Department of Education provided in-service teacher workshops. In the case of ITV, about 29 percent of the superintendents noted that a public TV station or network provided such workshops on ITV. For computers, the second most frequently named source of workshops was "other" (35 percent), probably representing individual vendors.

About 77 percent of all school principals in 1982-83 reported having received training in one or more of the instructional media. At all school levels, the highest percentage of principals reported having had training in computers, followed in order by "other media," ITV, and audio/radio (Table 84). As might be expected, given the recent proliferation of computers in the schools, almost all (95 percent) of the principals with training in computers indicated having received training within the last three years (Table 85).

Table 86 PERCENTAGE OF PRINCIPALS REPORTING ALL SOURCES OF MEDIA TRAINING, BY TYPE OF MEDIUM, 1982-83[a]

	Type of Medium[b]			
Sources of Training	ITV	Audio/radio	Computers	Other media
Preservice (undergraduate)	29%	49%	5%	45%
Graduate or continuing education	43	42	43	52
District in-service	46	27	62	26
Televised in-service series	12	5	3	4
Workshop by local public television station	10	1	2	2
State Department of Education in-service	14	5	13	8
Workshops at professional meetings	39	22	57	30
Self-taught	30	35	36	40
No. of sample cases	171	165	171	153
Est. pop. size	34,000	33,200	43,700	39,700

[a]As determined from Item 35 of the Principal Questionnaire. Respondents were asked to check all sources that applied.
[b]Analysis restricted to principals with training in particular medium.

Table 87 PERCENTAGE OF TEACHERS REPORTING ALL TRAINING IN MEDIA, BY TYPE OF MEDIUM AND SCHOOL LEVEL, 1982-83[a]

		School Level		
Medium	Total[b]	Elementary	Middle/junior high school	Senior high school
ITV	31%	30%	32%	33%
Audio/radio	44	42	51	45
Computers	40	39	44	40
Other media	60	61	63	55
None of the above	23	24	17	25
No. of sample cases	2,089	1,047	521	521
Est. pop. size	2,137,000	1,157,000	461,000	519,000

[a]As determined from Item 5 of the Teacher Questionnaire. Respondents were asked to check all categories that applied.
[b]Analysis based on all teachers.

Table 88 PERCENTAGE OF TEACHERS REPORTING ALL SOURCES OF MEDIA TRAINING, BY TYPE OF MEDIUM, 1982-83[a]

	Type of Medium[b]			
Sources of Training	ITV	Audio/radio	Computers	Other media
Preservice (undergraduate)	37%	62%	13%	63%
Graduate or continuing education	24	24	38	26
Required (in-service) workshop	20	12	24	15
Self-selected (in-service) workshop	26	16	51	16
Self-taught	31	29	21	28
No. of sample cases	660	936	866	1,183
Est. pop. size	662,000	940,000	855,000	1,282,000

[a]As determined from Item 6 of the Teacher Questionnaire. Respondents were asked to check all sources that applied.
[b]Analysis restricted to teachers with training in particular medium.

Almost half (44 percent) of those trained in ITV reported receiving such training in the past three years; this was the case for proportionately higher numbers of senior high school principals (54 percent). Fewer principals reported receiving training in "other media" and audio/radio in the last three years, except at the senior high school level, where 60 percent reported having received training in the former.

The primary sources of principal training differed by type of medium (Table 86). Among principals with training in ITV and/or computers, the most common form of training was district in-service. However, substantial percentages (40 percent or more) of these principals also reported such training from graduate or continuing education programs and from workshops at professional meetings. Preservice (undergraduate) and graduate programs were the sources named most frequently by principals with training in audio/radio and other media. About 10 percent of the principals trained in ITV indicated having received training from a televised in-service series and/or from workshops conducted by local public TV stations.

About three fourths of all teachers in the country had received training in one or more of the instructional media (Table 87). The most common training among teachers was in "other media" (60 percent), followed by audio/radio (44 percent), computers (40 percent), and ITV (31 percent). There appeared to be no meaningful relationship between school level and training for any of these media. For those teachers with training in ITV, audio/radio, and/or "other media," the type of training most often received was through formal undergraduate programs as opposed to required or self-selected in-service workshops (Table 88). For those with training in computers, however, the primary source of training was self-selected in-service workshops (51 percent), although a substantial number of these teachers (38 percent) also cited training from graduate or continuing education programs.

Table 89 PRINCIPALS' PERCEPTIONS OF DISTRICT PRACTICE REGARDING USE OF INSTRUCTIONAL MEDIA, 1982-83[a]

Perception	Type of Medium[b]			
	ITV	Audio/radio	Computers	Other media
Use is strongly encouraged	26%	18%	52%	34%
Use is encouraged but left to discretion of schools and teachers	50	47	36	46
Use is neither encouraged nor discouraged	23	33	10	18
Use is discouraged but left to discretion of schools and teachers	1	1	0[c]	1
Use is strongly discouraged	0[c]	0[c]	1	0[c]
No. of sample cases	929	851	715	877
Est. pop. size	76,000	72,000	63,000	81,000

[a] As determined from item 33 of the Principal Questionnaire.
[b] Analysis restricted to principals of schools with medium available.
[c] Represents a positive percentage less than 0.5.

D. DISTRICT/SCHOOL PRACTICES AND POLICIES ON INSTRUCTIONAL MEDIA (1982-83)

Another factor thought by many to affect the level or extent of instructional media use in schools is the attitude or, more important, the perceived attitude of superiors toward these media. In this survey, principals of schools with media available were asked, "Which best describes district practice regarding the use of various instructional technologies?" and given the response options shown in Table 89. Less than 2 percent of the principals thought that district practice discouraged use of any of the instructional media types (Table 89). For each type of medium, the majority of the principals thought that use was strongly encouraged, or encouraged but left to the discretion of individual schools and teachers, ranging from 65 percent for audio/radio to 88 percent for computers.

Teachers were asked the same question about their principals' practices regarding use of instructional media. As shown in Table 90, the pattern of responses for teachers closely paralleled that just described for principals, although proportionately more teachers believed that their principals neither encouraged nor discouraged use of each type of medium.

Finally, two other indirect measures of support were assessed for ITV only. First, superintendents of districts with ITV were asked if their districts had, or had participated in, one or more ITV advisory boards or similar bodies. About one third of the superintendents noted that their district did participate in such activities. Moreover, participation in ITV advisory boards was directly related to district size, with about 62 percent of the largest districts involved in this type of activity (Table 91). Superintendents were also asked if facilities for ITV typically were incorporated into new building designs for their districts. Two thirds (67 percent) of the superintendents of districts with ITV available reported that facilities for ITV were included in new building designs (Table 92).

Table 90 TEACHERS' PERCEPTIONS OF PRINCIPALS' ATTITUDES REGARDING USE OF MEDIA, 1982-83[a]

	Type of Medium[b]			
Perception	ITV	Audio/radio	Computers	Other media
Strongly encourage use	9%	11%	28%	13%
Encourage use but leave to discretion of individual teacher	45	46	39	50
Neither encourage nor discourage use	45	42	33	36
Discourage use but leave to discretion of individual teacher	1	0[c]	0[c]	0[c]
Strongly discourage use	0[c]	0[c]	0[c]	0[c]
No. of sample cases	1,946	1,956	1,816	1,985
Est. pop. size	2,137,000	2,137,000	2,137,000	2,137,000

[a]As determined from Item 8 of the Teacher Questionnaire.
[b]Analysis based on all teachers.
[c]Represents a positive percentage less than 0.5.

Table 91 PERCENTAGES OF DISTRICTS REPORTING PARTICIPATION IN ITV ADVISORY BOARDS, BY DISTRICT SIZE, 1982-83[a]

		Size of District				
District Participation in ITV Advisory Boards	Total[b]	0-2,499	2,500-4,999	5,000-9,999	10,000-24,999	25,000 and over
Percentage of districts	33%	27%	42%	45%	45%	62%
No. of sample cases	483	111	84	91	89	108
Est. pop. size	10,600	6,900	1,900	1,000	600	200

[a]As determined from Item 13 of the Superintendent Questionnaire.
[b]Analysis restricted to superintendents of districts with ITV available.

Table 92 PERCENTAGES OF DISTRICTS REPORTING THAT ITV IS TYPICALLY INCLUDED IN NEW BUILDING DESIGNS, BY DISTRICT SIZE, 1982-83[a]

		Size of District				
ITV Included in New Building Designs	Total[b]	0-2,499	2,500-4,999	5,000-9,999	10,000-24,999	25,000 and over
Percentage of districts	67%	63%	73%	81%	78%	69%
No. of sample cases	467	107	80	91	88	101
Est. pop. size	10,600	6,900	1,900	1,000	600	200

[a]As determined from Item 11 of the Superintendent Questionnaire.
[b]Analysis restricted to superintendents of districts with ITV available.

Changes in the Availability, Use, and Support of Instructional Television (1977-83)

This section examines changes in ITV availability and use patterns between the School TV Utilization Studies conducted in academic years 1976-77 (SUS-77) and 1982-83 (SUS-83). The content of this section was constrained somewhat by the correspondence between SUS-77 and SUS-83 survey instrumentation. Many SUS-77 survey items dealing with availability, use, and support of ITV, however, were repeated in the SUS-83 instruments (changing wording only to make dates consistent with the new time period or to improve directions for answering) to ensure comparability in cross-time analyses. The estimates derived from both studies for each of these items are compared in this section.

Budget and schedule prohibited reanalysis of the SUS-77 data; consequently, the scope of this investigation was restricted to comparisons with extant SUS-77 data (SUS-77 statistics that already existed in published or unpublished documents).

Because SUS was not designated as a longitudinal inquiry—that is, the integrity of the SUS-77 sample of districts, schools, and teachers was not preserved in SUS-83—item comparability rather than replication was emphasized. (For a complete description of the SUS-77 study methodology and instrumentation, see Dirr, Pedone, footnote, page 2).

In the following subsections, comparisons are made between SUS-77 and SUS-83 district, school and teacher estimates, and notable changes in ITV availability, use, and support patterns between 1977 and 1983 are discussed. Where possible and appropriate, tests of statistical significance are employed to evaluate differences between comparable SUS-77 and SUS-83 population means or percentages. In some instances, however, the discussion of change over time in a particular dimension is augmented by reference to specific change-related SUS-83 findings that have no direct correspondence in SUS-77. We believe that such an approach adds more depth and clarity to the sometimes otherwise isolated item-versus-item contrasts.

A. AVAILABILITY OF ITV PROGRAMMING

1. General Availability

Overall, the percentage of school districts reporting availability of ITV programming increased sharply from 73 percent in 1976-77 to 91 percent in 1982-83. The percentages of districts with available ITV programming in 1977 and 1983, reported by district size (measured by number of students) and district wealth (measured by per-student expenditure), are presented in Tables 93 and 94, respectively. Although the general pattern of increased availability is reflected within all size and wealth categories, the percent-

Table 93 PERCENTAGES OF DISTRICTS WITH ITV PROGRAMMING AVAILABLE, BY DISTRICT SIZE, 1977 and 1983[a]

Size of District	1976-77	1982-83	Difference
Districts with:			
0-2,499 students	66%	89%	23%[b]
2,500-4,999 students	84	94	10
5,000-9,999 students	93	97	4
10,000-24,999 students	85	98	13
25,000 students and over	96	99	3
All districts	73	91	18[b]

[a] Analyses based on all superintendents.
[b] The 1976-77 and 1982-83 percentage estimates represent a statistically significant difference at the .05 level.

age change is greatest among the smallest and least wealthy districts, for which the potential for increase typically was greatest. In 1976-77, ITV was available in only about two thirds of the smallest or least wealthy districts; as of 1982-83, about nine of ten of these districts, and virtually all of the largest and most wealthy districts, had ITV available.

Similar increases in ITV programming availability were observed at the school level, as shown in Table 95. In 1977, roughly seven of ten schools reported ITV programming availability; by 1983, estimates had risen to about 19 of 20. Marked increases were reported at all school levels, with the most notable changes occurring among the secondary schools.

The findings were quite different at the classroom level of analysis. Even in the presence of clearly increased availability of television as an instructional medium in the nation's districts and schools, availability of ITV to individual teachers showed no significant change from 1977 to 1983. As shown in Table 96, in both 1977 and 1983, approximately seven of ten teachers reported that ITV programming was available for use with their classes. It is not entirely clear why the dramatic increases in ITV programming availability reported by districts and schools were not reflected at the teacher or classroom level. Of course, availability of ITV programming to a school did not guarantee availability to all classes or teachers in that school, depending on the nature and extent of school practices governing use of available equipment. Nonetheless, taken at face value, the results suggest that *relative* availability to teachers has declined over the past six years; lower percentages of teachers in schools with ITV available reported having ITV available for use in their classrooms.

The methods of ITV programming reception also showed significant changes from 1977 to 1983. Table 97 shows significant increases at the district level between 1977 and 1983 in ITV signal availability directly off-air from commercial television,

Table 94 PERCENTAGES OF DISTRICTS WITH ITV PROGRAMMING AVAILABLE, BY DISTRICT WEALTH, 1977 and 1983[a]

Wealth of District	1976-77	1982-83	Difference
District per-student expenditure:			
Lowest quartile	64%	90%	26%[b]
Lower-middle quartile	72	89	17[b]
Upper-middle quartile	73	88	15
Highest quartile	83	95	12
All districts	73	91	18[b]

[a] Analyses based on all superintendents.
[b] The 1976-77 and 1982-83 percentage estimates represent a statistically significant difference at the .05 level.

Table 95 PERCENTAGES OF SCHOOLS WITH ITV PROGRAMMING AVAILABLE, BY SCHOOL LEVEL, 1977 and 1983[a]

School Level	1976-77	1982-83	Difference
Elementary	72%	93%	21%[b]
Middle/junior	66	91	25[b]
Senior high	68	97	29[b]
All schools	71	94	23[b]

[a] Analyses based on all principals.
[b] The 1976-77 and 1982-83 percentage estimates represent a statistically significant difference at the .05 level.

Table 96 PERCENTAGES OF TEACHERS WITH ITV PROGRAMMING AVAILABLE, BY SCHOOL LEVEL, 1977 AND 1983[a]

School Level	1976-77	1982-83	Difference
Elementary	75%	70%	5%
Middle/junior	64	71	7
Senior high	72	70	2
All schools	72	70	2

[a] Analyses based on all teachers.

Table 97 PERCENTAGES OF DISTRICTS INDICATING VARIOUS METHODS OF ITV RECEPTION, 1977 AND 1983[a]

Method of ITV Reception	1976-77	1982-83	Difference
Direct off-air broadcast from public television	74%	72%	2%
Direct off-air broadcast from commercial television	46	62	16[b]
Cable television	32	53	21[b]
Cassette or videotape	48	79	31[b]
Closed-circuit or master antenna system	18	18	0
ITFS (Instructional Television Fixed Service)	3	4	1

[a] Analyses restricted to superintendents of districts with ITV available.
[b] The 1976-77 and 1982-83 percentage estimates represent a statistically significant difference at the .05 level.

Table 98 PERCENTAGES OF SCHOOLS REPORTING VARIOUS METHODS OF ITV RECEPTION, BY SCHOOL LEVEL, 1977 AND 1983[a]

	All schools			School Level: Elementary			Middle/junior			Senior high		
Methods of ITV Reception	1976-77	1982-83	Difference	1976-77	1982-83	Difference	1976-77	1982-83	Difference	1976-77	1982-83	Difference
Direct off-air broadcast from public television	75%	67%	8%	78%	67%	11%	71%	65%	6%	62%	71%	9%
Direct broadcast from commercial television	38	60	22[b]	36	58	22[b]	40	61	21[b]	50	67	17[b]
Cable television	22	39	17[b]	23	37	14[b]	20	43	23[b]	20	45	25[b]
Videotape or cassette	28	65	37[b]	20	56	36[b]	46	83	37[b]	59	94	35[b]
Closed-circuit or master antenna system	11	16	5[b]	9	16	7[b]	12	17	5	29	19	10
ITFS (Instructional Television Fixed Service)	4	4	0	4	3	1	5	[illegible]	1	4	6	2

[a] Analyses restricted to principals of schools with ITV available.
[b] The 1976-77 and 1982-83 percentage estimates represent a statistically significant difference at the .05 level.

Table 99 PERCENTAGES OF SCHOOLS WITH TELEVISION SETS, BY DISTRICT SIZE AND SCHOOL LEVEL, 1977 AND 1983[a]

	All schools			School Level: Elementary			Middle/junior			Senior high		
Size of District	1976-77	1982-83	Difference	1976-77	1982-83	Difference	1976-77	1982-83	Difference	1976-77	1982-83	Difference
Districts with:												
0-2,499 students	84%	95%	11%[b]	86%	90%	4%[b]	49%	94%	45%[b]	84%	95%	11%
2,500-4,999 students	91	97	6	91	97	6	82	99	17[b]	86	99	13[b]
5,000-9,999 students	89	93	4	90	94	4	87	96	9	86	96	10
10,000-24,999 students	91	97	6	91	92	1	91	98	7	92	99	7[b]
25,000 students and over	95	97	2	94	95	1	95	98	3	88	99	11[b]
All districts	86	96	10[b]	88	92	4	65	95	30[b]	85	96	11[b]

[a] Analyses restricted to superintendents of schools with ITV available.
[b] The 1976-77 and 1982-83 percentage estimates represent a statistically significant difference at the .05 level.

from cable television, and by cassette or videotape. ITV signal availability directly off-air from public television, closed-circuit or master antenna systems, and ITFS remained about the same over this five-year period. Minor shifts in ordering of methods of reception also were observed during this period, with videotape/cassette now the most common form of ITV signal availability (79 percent), followed by direct broadcast from public television (72 percent).

Changes in the pattern of ITV signal availability at the school level closely paralleled those reported at the district level. Again, the most dramatic increase, overall and at each school level, was associated with ITV availability by videotape/cassette (Table 98). Significant increases also were reported at all school levels for reception off-air from commercial television and from cable television. In contrast to the district-level estimates, overall and among elementary schools, significant increases were observed in the percentage of schools receiving ITV programming by closed-circuit or master antenna systems.

2. ITV Equipment Availability

The use of instructional television depends on the availability of television sets and videotape/cassette equipment as well as the availability of ITV programming. According to superintendents in districts with ITV programming available, there was at least one television set in about 86 percent of all schools in 1976-77. As shown in Table 99, the estimate increased significantly between 1977 and 1983; in school year 1982-83, almost all schools (96 percent) in these districts were reported to have at least one television set available

Table 100 PERCENTAGES OF TEACHERS REPORTING VARIOUS TYPES OF TELEVISION SETS AVAILABLE, BY SCHOOL LEVEL, 1977 AND 1983[a]

	All schools			School Level								
				Elementary			Middle/junior			Senior high		
Type of TV Set Available	1976-77	1982-83	Difference	1976-77	1982-83	Difference	1976-77	1982-83	Difference	1976-77	1982-83	Difference
None	2%	3%	1%	2%	3%	1%	3%	1%	2%	3%	2%	1%
Black and white only	65	24	41[b]	71	29	42[b]	62	19	43[b]	54	17	37[b]
Color only	16	47	31[b]	17	47	30[b]	12	49	37[b]	16	44	28[b]
Both black and white and color	18	27	9[b]	11	21	10[b]	24	31	7	27	36	9[b]

[a] Analyses restricted to teachers of schools with ITV available.
[b] The 1976-77 and 1982-83 percentage estimates represent a statistically significant difference at the .05 level.

Table 101 PERCENTAGES OF SCHOOLS WITH VIDEOTAPE EQUIPMENT, BY DISTRICT SIZE AND SCHOOL LEVEL, 1977 AND 1983[a]

	All schools			School Level								
				Elementary			Middle/junior			Senior high		
Size of District	1976-77	1982-83	Difference	1976-77	1982-83	Difference	1976-77	1982-83	Difference	1976-77	1982-83	Difference
Districts with:												
0-2,499 students	40%	77%	37%[b]	29%	70%	41%[b]	27%	82%	55%[b]	62%	97%	35%[b]
2,500-4,999 students	41	75	34[b]	26	70	44[b]	59	96	37[b]	77	98	21[b]
5,000-9,999 students	45	62	17	32	57	25[b]	62	91	29[b]	80	95	15
10,000-24,999 students	44	70	26	32	55	23	62	80	18	81	92	11
25,000 students and over	33	67	34[b]	19	57	38[b]	60	85	25	69	92	23[b]
All districts	40	74	34[b]	28	68	40[b]	41	87	46[b]	69	97	28[b]

[a] Analyses restricted to superintendents of schools with ITV available.
[b] The 1976-77 and 1982-83 percentage estimates represent a statistically significant difference at the .05 level.

for instructional purposes. Although Table 99 shows a general pattern of increase in schools with television sets across all school levels and district size categories, the most dramatic changes occurred at the middle/junior and senior high school levels.

In 1983, as in 1977, among teachers to whom ITV was available, virtually all (about 97 percent) reported that they had access to either a black and white or a color television set for use with their classes. As shown in Table 100, however, the percentage of teachers who had access to color television sets increased significantly in this six-year period, from about one of three in 1977 to three of four in 1983. Significant increases in the percentage of teachers with color sets available were observed for all three school levels, although in 1982-83, color sets appeared to be proportionately more available to middle/junior and senior high teachers (80 percent) than to elementary school teachers (68 percent).

More sizable increases appeared for videotape/cassette equipment. Almost three of four schools in districts with ITV available in 1983 had at least one videotape recorder for instructional use compared to 40 percent of such schools in 1977. Table 101 shows that the percentage of schools with videotape equipment increased significantly between 1977 and 1983 for all three school levels and within most district size categories. By 1983, nearly all senior high schools (97 percent) in these districts had videotape recorders, whereas about 87 percent of the middle/junior high and 68 percent of the elementary schools had such equipment. These findings are consistent with the results presented in Tables 97 and 98 showing the increase in program availability through videotape/cassette equipment.

The size and nature of past and future increases in both set and signal availability were also examined in this study. Although there was minimal overlap of the target periods in the two studies, some conclusions can be drawn from the responses of superintendents in districts with ITV available regarding planned and actual expansion of ITV equipment (Table 102). In general, the major areas in which

Table 102 PERCENTAGES OF DISTRICTS REPORTING VARIOUS TYPES OF ITV EQUIPMENT EXPANSION PLANNED AND IMPLEMENTED[a]

Type of Expansion	Expansion planned 1978-1980	Expansion planned 1984-1986	Expansion done 1980-1983
Increase the number of television sets	46%	38%	66%
Replace black and white television sets by color	31	32	55
Add videotape/cassette equipment	47	41	79
Add master antenna, cable TV, or internal distribution system	20	21	32
Add production equipment	19	21	26
None	32	40	22

[a] Analyses restricted to superintendents of districts with ITV available.

Table 103 PERCENTAGES OF DISTRICTS WITH SYSTEMATIC PROCESS FOR REPLACING OLD ITV EQUIPMENT, 1977 AND 1983[a]

System to Replace Old ITV Equipment	1976-77	1982-83	Difference
Percentage of districts	20%	34%	14%[b]

[a] Analyses restricted to superintendents of districts with ITV available.
[b] The 1976-77 and 1982-83 percentage estimates represent a statistically significant difference at the .05 level.

Table 104 PERCENTAGES OF TEACHERS USING ITV, BY SCHOOL LEVEL, 1977 AND 1983[a]

School Level	1976-77	1982-83	Difference
Elementary	68%	56%	12%[b]
Middle/junior	49	51	2
Senior high	49	51	2
All schools	59	54	5

[a] Analyses restricted to teachers of schools with ITV available.
[b] The 1976-77 and 1982-83 percentage estimates represent a statistically significant difference at the .05 level.

expansion occurred—increasing the number of videotape/cassette recorders and television sets—were the primary areas for which expansion was planned in 1978-80 and remained the major areas of planned growth. Further, more than half (55 percent) of superintendents reported that their districts had replaced black and white television sets with color sets, and one third of these districts (32 percent) plan such replacements in the next three years. This finding is consistent with both the previously reported results concerning the increased accessibility of color sets to teachers and the estimates seen in Table 103, which show that there was a significant increase between 1977 and 1983 in the percentage of districts with a systematic process for replacing old ITV equipment (20 percent in 1977 versus 34 percent in 1983).

B. USE OF ITV

1. Overall Use

In 1982-83, an estimated 54 percent of all teachers reporting ITV available reported that they used ITV programming with their classes; the corresponding estimate for 1976-77 was 59 percent (Table 104). As Table 104 shows, this decrease in the percentage of teachers who used ITV can be attributed entirely to a decline in use by elementary school teachers from 68 percent in 1977 to 56 percent in 1983. Nonetheless, use of ITV in 1983 continued to be proportionately higher among elementary school teachers (56 percent) than among middle/junior high or senior high school teachers (51 percent).

In terms of "extent" of use, however, the picture appears somewhat different. The 1982-83 survey also assessed trends in ITV use by asking teachers who used ITV if they used it more or less in 1983 than in the previous three years. Overall, these teachers reported a slight increase in ITV use over the three-year period, although the highest percentage of teachers (41 percent) used ITV with about the same frequency in 1982-83 that they had over the previous three years. There were differences by school level, however, with proportionately more high school teachers (38 percent) than elementary school teachers (32 percent) reporting increased frequency of use. These findings are consistent with other results showing that teachers who used ITV reported an average weekly viewing time of about 90 minutes in 1983 compared to about 60 minutes in 1977.

There may have been a slight decline over the six-year period in the percentage of teachers who used ITV regularly, with regular use defined as using 75 percent or more of all lessons in at least one series. In 1976-77, about 33 percent of all teachers used ITV regularly with their classes, whereas 29 percent of these teachers noted regular use of ITV in 1982-83 (Table 105). This decrease in the regular use of ITV can be attributed to a decrease in use by elementary school teachers from 58 percent in 1977 to 67 percent in 1983 reporting no regular use of ITV series. Nonetheless, regular use of ITV continued to be proportionately higher among elementary school teachers than among secondary school teachers. Although there was no significant change in the percentage of middle/junior high and senior high school teachers using ITV regularly, in 1983 proportionately more of the regular users in these schools were using more than one ITV series on a regular basis.

In both 1977 and 1983, teachers named more than 500 different ITV series that they had used during the year. Of the 580 series identified in 1983, only about 24 percent (137 series) were also used in 1977. The number of series used by 10,000 or more teachers more than doubled; only

Table 105 PERCENTAGES OF TEACHERS USING ITV REGULARLY, BY SCHOOL LEVEL, 1977 AND 1983[a]

Number of Series Used Regularly	All schools			School Level: Elementary			Middle/junior			Senior high		
	1976-77	1982-83	Difference	1976-77	1982-83	Difference	1976-77	1982-83	Difference	1976-77	1982-83	Difference
No series	67%	71%	4%	58%	67%	9%[b]	75%	72%	3%	78%	81%	3%
One series	13	6	7[b]	14	7	7[b]	15	6	9[b]	13	3	10[b]
Two or more series	20	23	3	28	26	2	10	22	12[b]	9	16	7[b]

[a] Analyses based on all teachers.
[b] The 1976-77 and 1982-83 percentage estimates represent a statistically significant difference at the .05 level.

Table 106 ESTIMATES OF TEACHERS AND STUDENTS USING MOST WIDELY USED ITV SERIES, 1977 AND 1983[a]

	1976-77 School Year		1982-83 School Year		
	ITV series	No. of teachers using	ITV series	No. of teachers using[b]	No. of students viewing
1	*The Electric Company*	174,000	*The Electric Company*	104,000	3,455,000
2	*Cover to Cover I*	72,000	*NOVA*	94,400	10,517,000
3	*All About You*	67,000	*National Geographic*	77,500	7,456,000
4	*Inside Out*	55,000	*Inside Out*	74,600	3,082,000
5	*Sesame Street*	51,000	*All About You*	72,500	1,775,000
6	*Ripples*	33,000	*Slim Goodbody*	69,000	1,720,000
7	*Bread and Butterflies*	26,000	*Read All About It*	55,300	967,000
8	*Villa Alegre*	21,000	*Gather-Round*	55,000	2,002,000
9	*Matter of Fiction*	17,000	*Mulligan Stew*	46,400	1,332,000
10	*Mulligan Stew*	17,000	*Thinkabout*	46,000	1,748,000
11	*Measuremetrics*	16,000	*It Figures*	44,600	982,000
12	*Word Shop*	15,000	*Stories of America*	42,200	861,000
13	*Cover to Cover II*	15,000	*Sesame Street*	34,400	857,000
14	*NOVA*	15,000	*Book Bird*	33,900	1,477,000
15	*Art* (General)	15,000	*Life on Earth*	32,900	2,555,000
16	*Let's All Sing*	14,000	*Shakespeare*	27,500	3,347,000
17	*Wordsmith*	13,000	*Cover to Cover*	25,300	2,777,000
18	*Ascent of Man*	12,000	*Storybound*	25,000	2,787,000
19	*Music* (General)	12,000	*Zoo Zoo Zoo*	24,700	705,000
20	*America*	11,000	*After School Specials*	24,200	2,128,000
21	*Letter People*	10,000	*Truly American*	22,800	867,000
22	*Draw Man*	10,000	*Letter People*	21,700	728,000
23	*Adams Chronicles*	10,000	*COSMOS*	20,500	1,463,000
24	*Infinity Factory*	9,000	*3-2-1 Contact*	18,600	551,000
25	*National Geographic*	9,000	*Assignment the World*	18,600	767,000

[a] Analyses restricted to teachers who used ITV in 1976-77 and 1982-83.
[b] Standard errors of rare events tend to approach or even exceed the values of the estimates; consequently, to improve the stability of the SUS-83 estimates provided in this table, programs reported by fewer than 12 teachers or national estimates of teacher totals less than 18,500 were not reported.

nine series, however, were used by more than 10,000 teachers in both 1977 and 1983. In both 1977 and 1983, the list of the 25 most frequently used series (Table 106) was dominated by series designed for the elementary grades (e.g., *Electric Company, All About You*). It is interesting to note that, although more teachers tended to use series designed for the elementary grades, the most students tended to view series designed for the secondary school level. For example, although more teachers used *Electric Company* than *NOVA* in 1982-83, an estimated three times as many students viewed *NOVA*.

2. Integration of ITV with Other Classroom Activities

Data from the 1982-83 survey were consistent with previous survey results in showing that teachers who used ITV generally attempted to integrate program viewing into the overall curriculum and instructional process. Both surveys found

that virtually all teachers who used ITV regularly with their classes combined program viewing with at least some preparatory or follow-up discussion. As shown in Table 107, however, there were some interesting and significant changes between 1977 and 1983 in the amount of time teachers devoted to such discussions. First of all, the percentage of teachers who spent at least some class time discussing ITV programs before the class viewed them increased significantly from 80 percent in 1977 to [illegible]ent in 1983, as did the percentage of teachers who devoted class time to follow-up discussion of ITV lessons (from 95 percent in 1977 to 99 percent in 1983). On average, teachers who used ITV in 1982-83 noted that they spent about 17 minutes of class time preparing to view an ITV program and 22 minutes following up on the program; the corresponding times in 1976-77 were seven minutes and 13 minutes for preparation and follow-up discussion, respectively. Moreover, the 1982-83 survey found that teachers at the middle/junior high and senior high school levels typically spent considerably more time discussing ITV lessons both before and after classes viewed them than did elementary school teachers.

Teachers who used ITV in 1982-83 were also asked to indicate the frequency with which classroom assignments were related to the ITV programs (SUS-77 contained no corresponding question). About three of four teachers at all school levels indicated that assignments were related to ITV programs at least some of the time.

Finally, teachers using ITV can make various arrangements for student viewing. Both SUS-77 and SUS-83 found that the most common procedure used was for the entire class to view programs as a single group. Combining classes for ITV viewing was the next most common and was a more likely arrangement in elementary than in secondary grades. Small group or individual viewing was a much less frequent approach and was reported almost exclusively by secondary school teachers.

Table 107 CLASS TIME TYPICALLY SPENT BY TEACHERS DISCUSSING ITV LESSON BEFORE AND AFTER PROGRAM VIEWING, 1977 AND 1983[a]

	Preparing for ITV lesson			Following up on ITV lesson		
Time Spent	1976-77	1982-83	Difference	1976-77	1982-83	Difference
More than 15 mins.	16%	22%	6%	33%	36%	3%
11-15 mins.	10	17	7[b]	18	18	0
6-10 mins.	23	23	0	26	26	0
1-5 mins.	30	28	2	18	20	2
None	20	10	10[b]	5	1	4[b]

[a] Analyses restricted to teachers who used ITV regularly.
[b] The 1976-77 and 1982-83 percentage estimates represent a statistically significant difference at the .05 level.

Table 108 PERCENTAGES OF DISTRICTS REPORTING PRODUCTION OF ORIGINAL ITV PROGRAMS, BY DISTRICT SIZE, 1977 AND 1983[a]

Size of District	1976-77	1982-83	Difference
Districts with:			
0-2,499 students	26%	45%	19%
2,500-4,999 students	42	47	5
5,000-9,999 students	40	57	17
10,000-24,999 students	55	43	12
25,000 students and over	60	67	7
All districts	34	47	13[b]

[a] Analyses restricted to superintendents of districts with ITV available.
[b] The 1976-77 and 1982-83 percentage estimates represent a statistically significant difference at the .05 level.

Table 109 PERCENTAGES OF DISTRICTS REPORTING PRODUCTION OF ORIGINAL ITV PROGRAMS, BY DISTRICT WEALTH, 1977 AND 1983[a]

Wealth of District	1976-77	1982-83	Difference
District per-student expenditure:			
Lowest quartile	26%	38%	12%
Lower-middle quartile	25	40	15
Upper-middle quartile	36	52	16
Highest quartile	49	59	10
All districts	34	47	13[b]

[a] Analyses restricted to superintendents of districts with ITV available.
[b] The 1976-77 and 1982-83 percentage estimates represent a statistically significant difference at the .05 level.

3. Local Production of ITV Programs

Almost half (47 percent) of the superintendents of districts with ITV available in 1982-83 reported production of some original ITV programs. This represented a significant increase from approximately one in three superintendents reporting such productions in 1976-77. As shown in Tables 108 and 109, district production of original ITV programs continued to be directly related to both district size and wealth, with proportionately more of the largest and wealthiest districts undertaking such productions. At the school level, however, the percentage of principals indicating that their school produced original ITV programs for school use remained about the same for the two time periods (35 percent), with almost twice the percentage of high schools as elementary schools involved in such productions (Table 110).

The major uses of both district and school productions of original ITV programs were student-oriented: for instruction, for production experience for students, for student feedback of their own performance. Although this finding held in both 1977 and 1983, some differences in the percentages of superintendents and principals noting such uses at each time point were observed. For example, Table 111 shows a significant decline in the use of such productions for student instructional purposes. For school uses of original ITV productions, however, Table 112 shows a significant decline between 1977 and 1983 in the percentage of principals reporting use of such productions for in-service training from 36 percent to 25 percent, whereas administrative uses of such productions increased significantly. Student-oriented uses of these productions did not change significantly.

Table 110 PERCENTAGES OF SCHOOLS REPORTING PRODUCTION OF ORIGINAL ITV PROGRAMS, BY SCHOOL LEVEL, 1977 AND 1983[a]

School Level	1976-77	1982-83	Difference
Elementary	27%	29%	2%
Middle/junior	53	52	1
Senior high	68	56	12
All schools	35	36	1

[a] Analyses restricted to principals of schools with ITV available.

Table 111 PERCENTAGES OF DISTRICTS REPORTING VARIOUS USES OF ORIGINAL ITV PRODUCTIONS, 1977 AND 1983[a]

Uses of Original ITV Productions	1976-77	1982-83	Difference
For instruction	85%	68%	17%[b]
For administrative use	18	20	2
For in-service training	51	38	13
For production experience for students	66	73	7
For teacher feedback of own performance	48	44	4
For student feedback of own performance	63	52	11

[a] Analyses restricted to superintendents of districts that produce original ITV programs.
[b] The 1976-77 and 1982-83 percentage estimates represent a statistically significant difference at the .05 level.

C. SUPPORT FOR ITV

1. Financial Support

Meaningful examination of financial support for ITV is difficult, because much of this information is kept at the district level and districts vary greatly in terms of both size and wealth. Additionally, funds for instructional media are frequently "buried" in several budgets or budget line items, and many superintendents report difficulty in "teasing out" and compiling this information. Nonetheless, some data from superintendents on "total media budgets (excluding textbooks)" for 1982-83 are available. (Comparable data were requested from superintendents of districts with ITV available for 1976-77 in SUS-77; however, only 60 percent of them provided such information, and 40 percent of those indicated a total ITV budget of zero dollars. Consequently, any comparisons between SUS-77 and SUS-83 media budgets would be inappropriate.) The budgets reported ranged widely from very few dollars to about $1 million with a mean and median total budget of all reporting districts of about $58,000 and $50,000, respectively. On average, superintendents reported that about 15 percent of the total media budget was allocated to ITV, with the remainder going to computers, audio/radio, and other media. It should be emphasized that this estimate represented only district expenditures. Appproximately one fifth of the total funding for ITV equipment also came from federal programs, and state programs and school building budgets also contributed substantially.

Table 113 DIRECTION OF DISTRICT PER CAPITA FINANCIAL SUPPORT FOR ITV BETWEEN 1980 AND 1983[a]

Support for ITV	
Increased	42% (± 4)
Remained the same	41 (± 4)
Decreased	12 (± 3)
Don't know	4 (± 2)

[a] Analyses restricted to superintendents of districts with ITV available. Figures in parentheses represent the standard error of the SUS-83 estimates.

In 1983, about 42 percent of the superintendents indicated that per capita financial support for ITV increased over the past three years, whereas about 12 percent indicated that support remained the same and, if inflation during this period is considered, more than half of all districts may have experienced a reduction in actual funding (or equivalent dollars) for ITV.

2. ITV Training and Support Staff

The percentage of school districts that made available to their teachers in-service workshops on the use of ITV did not change significantly between 1977 and 1983, with about half of the superintendents at both time points reporting that such workshops were offered. Table 114 shows that ITV in-service workshops continued to be more available to teachers in larger districts than to those in smaller districts.

At all school levels, the percentage of teachers and principals who had received training in ITV increased significantly between 1977 and 1983 (Tables 115 and 116). Among those principals who had been trained in ITV, the pattern of training source remained relatively constant from 1977 to 1983. The primary sources of

Table 112 PERCENTAGES OF SCHOOLS REPORTING VARIOUS USES OF ORIGINAL ITV PRODUCTIONS, BY SCHOOL LEVEL, 1977 AND 1983[a]

Uses of Original ITV Production	All schools			School Level: Elementary			Middle/junior			Senior high		
	1976-77	1982-83	Difference	1976-77	1982-83	Difference	1976-77	1982-83	Difference	1976-77	1982-83	Difference
For instruction	74%	61%	13%	68%	56%	12%	76%	69%	7%	87%	66%	21%
For administrative use	8	15	7[b]	9	15	6	7	12	5	7	17	10
For in-service training	36	25	11[b]	37	24	13	40	23	17[b]	28	31	3
For production experience for students	54	57	3	48	50	2	60	69	9	68	63	5
For teacher feedback of own performance	42	34	8	42	36	6	39	30	9	43	32	11
For student feedback of own performance	65	57	8	60	52	8	69	60	9	72	69	3

[a] Analyses restricted to principals of schools that produce original ITV programs.
[b] The 1976-77 and 1982-83 percentage estimates represent a statistically significant difference at the .05 level.

Table 114 PERCENTAGES OF DISTRICTS THAT MAKE AVAILABLE TO TEACHERS IN-SERVICE WORKSHOPS ON THE USE OF ITV, BY DISTRICT SIZE, 1977 AND 1983[a]

Size of District	1976-77	1982-83	Difference
Districts with:			
0-2,499 students	47%	43%	4%
2,500-4,999 students	61	60	1
5,000-9,999 students	65	65	0
10,000-24,999 students	73	56	17
25,000 students and over	80	75	5
All districts	54	50	4

[a] Analyses restricted to superintendents of districts with ITV available.

Table 115 PERCENTAGES OF TEACHERS REPORTING TRAINING IN ITV, BY SCHOOL LEVEL, 1977 AND 1983[a]

School Level	1976-77	1982-83	Difference
Elementary	17%	30%	13%[b]
Middle/junior	18	32	14[b]
Senior high	18	33	15[b]
All schools	17	31	14[b]

[a] Analyses based on all teachers.
[b] The 1976-77 and 1982-83 percentage estimates represent a statistically significant difference at the .05 level.

Table 116 PERCENTAGES OF PRINCIPALS REPORTING TRAINING IN ITV, BY SCHOOL LEVEL, 1977 AND 1983[a]

School Level	1976-77	1982-83	Difference
Elementary	28%	44%	16%[b]
Middle/junior	24	36	12[b]
Senior high	27	38	11
All schools	27	42	15[b]

[a] Analyses based on all principals.
[b] The 1976-77 and 1982-83 percentage estimates represent a statistically significant difference at the .05 level.

such training continued to be district in-service, followed by workshops at professional meetings and formal college (undergraduate) programs (Table 117).

In 1982-83, as in 1976-77, about half of the superintendents noted that there was someone with district-wide responsibility for coordinating ITV, and large districts were proportionately more likely than small districts to have such a position (Table 118). In 1982-83, the district-wide ITV coordinator typically devoted about 20 percent of his or her time to such activities compared to 26 percent in 1977, suggesting no major change in this role over the past six years.

The percentage of schools with building-level ITV coordinators also remained about the same (55 percent in 1983 compared to 52 percent in 1977), and these persons continued to be proportionately more prevalent in secondary schools than in elementary schools (Table 119). Almost four of five (79 percent) building coordinators were reported to have training in ITV use, a significant increase from the estimated 62 percent who had such training in 1976-77); again, this was most likely to be the case in the secondary schools (Table 120).

3. District/School Practices Regarding ITV

Another element of support for ITV, which may affect the extent of ITV use in schools, is the perceived attitudes of superiors toward the medium. In both SUS-77 and SUS-83, principals of schools with ITV available were asked, "Which best describes district practice regarding the use of ITV?" In 1982-83, less than 2 percent of the principals thought that district practice discouraged use of ITV, whereas about three of four principals (76 percent) thought that use was strongly encouraged, or encouraged but left to the discretion of individual schools and teachers. The corresponding percentages for 1976-77 (Table 121) show that the percentage of principals who perceived a favorable district attitude toward ITV use increased significantly.

Table 117 PERCENTAGES OF PRINCIPALS REPORTING VARIOUS SOURCES OF TRAINING IN ITV, 1977 AND 1983[a]

Sources of Training	1976-77	1982-83	Difference
Preservice (undergraduate)	37%	29%	8%
District in-service	47	46	1
Televised in-service series	19	12	7
Workshop by local public TV station	18	10	8
State department of education in-service	16	14	2
Workshops at professional meetings	42	39	3

[a] Analyses restricted to principals with training in ITV.

Table 118 PERCENTAGES OF DISTRICTS WITH DISTRICT-WIDE ITV COORDINATOR, BY DISTRICT SIZE, 1977 AND 1983[a]

Size of District	1976-77	1982-83	Difference
Districts with:			
0-2,499 students	35%	46%	11%
2,500-4,999 students	48	48	0
5,000-9,999 students	66	67	1
10,000-24,999 students	78	58	20
25,000 students and over	86	73	13
All districts	46	50	4

[a] Analyses restricted to superintendents of districts with ITV available.

Table 119 PERCENTAGES OF SCHOOLS WITH BUILDING-LEVEL ITV COORDINATOR, BY SCHOOL LEVEL, 1977 AND 1983[a]

School Level	1976-77	1982-83	Difference
Elementary	48%	51%	3%
Middle/junior	58	61	3
Senior high	71	70	1
All schools	52	55	3

[a] Analyses restricted to principals of schools with ITV available.

Table 120 PERCENTAGES OF SCHOOLS WHERE BUILDING-LEVEL ITV COORDINATOR HAS TRAINING IN ITV, BY SCHOOL LEVEL, 1977 AND 1983[a]

School Level	1976-77	1982-83	Difference
Elementary	53%	75%	22%[b]
Middle/junior	77	85	8
Senior high	85	91	6
All schools	62	79	17[b]

[a] Analyses restricted to principals of schools with building-level ITV coordinator available.
[b] The 1976-77 and 1982-83 percentage estimates represent a statistically significant difference at the .05 level.

Table 121 PRINCIPALS' PERCEPTIONS OF DISTRICT PRACTICE REGARDING USE OF ITV, 1977 AND 1983[a]

Perception	1976-77	1982-83	Difference
Use is strongly encouraged	11%	26%	15%[b]
Use is encouraged but left to discretion of schools and teachers	57	50	7[b]
Use is neither encouraged nor discouraged	30	23	7[b]
Use is discouraged but left to discretion of schools and teachers	3	1	2[b]
Use is strongly discouraged	1	1	0

[a] Analyses restricted to principals of schools with ITV available.
[b] The 1976-77 and 1982-83 percentage estimates represent a statistically significant difference at the .05 level.

D. SUMMARY AND CONCLUSIONS

Comparison of the data obtained from SUS-77 and SUS-83 documents a significant increase between 1977 and 1983 in the availability of ITV programming at the district and school levels. In 1983, ITV was available to more than nine of ten of the nation's districts and schools. Most dramatic increases in ITV programming availability occurred among the smallest and least wealthy districts and among senior high schools. For reasons that are not entirely clear, this increase was not reflected at the classroom level, where the percentage of teachers reporting available ITV programming for use with their classes remained approximately the same, about 70 percent. Discounting the methodological problems that may account for part of this problem (differences in instrumentation at the district and school level), perhaps the best explanation for this apparent contradiction is that availability of ITV programming at the classroom level is somewhat more varied, or is perceived as such by teachers, than it is at the school or district level. There is some evidence that teachers equate ITV programming availability with personal "access," which may be limited by such factors as lack of working television sets or recorders, a poor broadcast signal, or other deterrents to use.

Significant changes also occurred in the methods of ITV programming reception. At both the district and school levels, by far the most dramatic increase was associated with ITV programming availability through videotape/cassette. Significant increases also were reported for reception directly off-air from commercial television and from cable television. Minor shifts in the ordering of these reception methods also took place, with videotape/cassette becoming the most common form of ITV programming reception, followed by direct off-air broadcast from public television.

Changes in the availability of ITV equipment were both quantitative and qualitative. In 1983, virtually all districts and schools had television sets available for instruction, reflecting significant increases in the availability of sets at the middle/junior and senior high school levels. More sizable increases were reported for videotape equipment. By 1983, nearly all senior high schools in districts with ITV had videotape recorders, whereas about 87 percent of the middle/junior high and two thirds of the elementary schools had such equipment. More than half of the school districts reported that they had replaced black and white television sets with color sets since 1977, and the percentage of districts reporting the existence of a systematic process for replacing old television equipment increased significantly, from one in five to one in three districts. These results were reflected at the teacher level, where increases in the percentage of teachers reporting access to a color television set were dramatic at all school levels.

These findings suggest that increases in ITV availability involve the upgrading of existing equipment and facilities as well as the acquisition of new equipment. Furthermore, data from SUS-83 suggest that the major areas in which expansion occurred between 1977 and 1983—the number of videotape recorders and television sets—are the primary areas in which future expansion may be anticipated.

The results pertaining to changes in use of ITV are less straightforward. In both 1976-77 and 1982-83, more than half of all teachers reporting that ITV was available indicated that they used ITV during the school year with their classes, with no significant change in the overall percentage of teachers who reported ITV use. Comparisons by school level, however, show a significant decrease in the percentage of elementary school teachers reporting use of ITV, from 68 percent in 1977 to 56 percent in 1983.

These findings parallel those for *regular* use of ITV (the use of 75 percent or more of all lessons in at least one series) by teachers. Overall, the percentage of teachers who used ITV regularly did not change significantly between 1977 and 1983, with roughly 30 percent of all teachers indicating regular use at both time points. At the elementary level, however, the percentage of teachers who used ITV regularly declined significantly, from 42 percent in 1977 to 33 percent in 1983, although regular use continued to be proportionately higher among elementary school teachers than among secondary school teachers.

In both 1977 and 1983, teachers named more than 500 different series that they had used during the school year; however, only 137 (24 percent) of these series were used in both years. The number of series used by more than 10,000 teachers more than doubled, and substantial changes occurred in the list of the 25 most frequently used series. In fact, only nine series appear on the lists for both school years.

The 1982-83 survey reaffirmed the conclusion drawn from the previous survey that teachers who use ITV generally attempt to integrate program viewing into the overall curriculum and instructional process. Both surveys found that virtually all teachers who used ITV regularly combined program viewing with at least some preparatory and follow-up discussion; however, the amount of class time teachers devote to such discussion has increased significantly since 1977.

Although the percentage of districts indicating production of some original ITV programs increased significantly (from 34 percent in 1977 to 47 percent in 1983), the percentage of schools undertaking such productions of original ITV programs were student-oriented: for instruction, for production experience for students, for student feedback.

Meaningful examination of changes in support for ITV between 1977 and 1983 was, to some extent, precluded by measurement problems in both SUS-77 and SUS-83 regarding financial support items. As a result, it is not possible to draw conclusions (with any reasonable degree of confidence) about changes in financial support for ITV between 1977 and 1983; consequently, this summary will be restricted to other nonfinancial dimensions of support.

In the area of training in media use, the percentages of both teachers and principals at all school levels who report having received training in ITV have increased significantly since 1977. In 1982-83, almost one third of all teachers and about 40 percent of all principals reported such training.

In 1983, as in 1977, the superintendents of about half of the school districts reported employing someone with district-wide responsibility for ITV coordination. District-wide ITV coordination continued to be a part-time assignment, and the amount of time devoted to such responsibilities (about 20 percent) suggests that there was no major change in this role between 1977 and 1983. The overall percentage of building-level ITV coordinators also remained roughly the same (about 55 percent) over the six-year period, and high schools continued to be proportionately more likely (70 percent) than elementary schools (51 percent) to have a building-level ITV coordinator. However, the percentage of building-level ITV coordinators with training in ITV increased significantly between 1977 and 1983.

Appendix A

SUMMARY OF SUS-83 STUDY DESIGN AND SURVEY METHODOLOGY

A. THE SAMPLE

The SUS-83 sample design called for a sample of classroom teachers, schools, and school districts. The sampling procedure was designed to ensure to the extent possible that every teacher in the nation (in public school districts and Catholic dioceses with enrollments of 300 or more) had an equal chance of being selected for participation in the study. (Investigation in Catholic dioceses was restricted, however, to elementary school teachers.) A stratified multistage probability sample was employed that involved: (1) selecting a sample of school districts with probability proportional to size (PPS), using number of teachers as the size measure; (2) selecting a sample of schools (to desired levels of elementary, middle/junior high, and senior high) within selected districts; and (3) selecting a sample of two teachers within each selected school.

The final determination of sample sizes was based on considerations of expected sampling error of estimates and resources available for conducting the study. More specifically, it was determined that the sample sizes would be sufficient to produce estimates at the teacher level which are as precise as those produced by SUS-77, with roughly equivalent precision of estimates at the district and school level. The final SUS-83 sample sizes are shown below:

Districts/dioceses		619
Schools		1,350
Elementary	675	
Middle/junior high	338	
Senior high	337	
Teachers		2,700
Elementary	1,350	
Middle/junior high	676	
Senior high	674	

B. DATA COLLECTION

The SUS-83 survey was conducted by mail questionnaire with telephone follow-up interviews of mail nonrespondents. Survey questionnaires (Appendix B) were developed to gather information at three levels: a Superintendent Questionnaire for district-level data, a Principal Questionnaire for school-level data, and a Teacher Questionnaire for classroom-level data.

It was thought that response rates might be increased if the study was endorsed by well-known and respected organizations with which the potential respondents might be affiliated. Therefore, appropriate endorsements were obtained from the American Association of School Administrators (AASA), the American Federation of Teachers (AFT), the Association for Educational Communications and Technology (AECT), the Council of Chief State School Officers (CCSSO), the National Association of Elementary School Principals (NAESP), the National Association of Secondary School Principals (NASSP), the National Catholic Educational Association (NCEA), the National Education Association (NEA), National Public Radio (NPR), and the Public Broadcasting Service (PBS). Some endorsing organizations publicized the study through their professional publications and encouraged the cooperation of their membership.

Data were collected during the period February through May 1983. Survey procedures consisted of:

(1) a notification mailing on February 7, 1983 to all selected superintendents and principals indicating the nature and timing of the survey;

(2) an initial questionnaire mailing to all selected superintendents and principals (the mailing to principals included instructions to principals on teacher selection, a mail-back postcard to report the names of selected teachers, and two Teacher Questionnaires for distribution);

(3) a first follow-up mailing of a prompting letter to all selected principals, including an additional teacher identificaton return postcard and teacher selection instructions;

(4) a telephone prompting call to principals of schools from which the teacher returns were incomplete and teacher name card had not been returned, including a

prompting of any such principal from whom a questionnaire had not been received;

(5) a second questionnaire mailing to previously nonresponding principals and superintendents and a direct questionnaire mailing to previously nonresponding teachers;

(6) a second follow-up mailing of a prompting postcard to all recipients of the second mailing; and

(7) attempts to obtain a complete questionnaire telephone interview of all superintendents, teachers, and principals who were mail nonrespondents (and had not previously refused).

The cut-off date for data collection activities (for acceptance of returned questionnaires or completed telephone interviews) was June 8, 1983. Final response rates for the three questionnaires were: 86 percent for superintendents, 84 percent for principals, and 80 percent for teachers.

C. DATA RECEIPT AND DOCUMENT CONTROL

All questionnaires and postcards returned by mail were received and batched at a central location. Questionnaires returned by mail were batched and forwarded to receipt control entry, where an optical-reader wand was used to scan the bar-coded ID number to record receipt into an automated survey control system. Postcards were batched and forwarded to receipt control entry, where teacher's names and counts were entered into the control system through direct key-to-tape data entry. Questionnaires completed during telephone interviews were also batched and forwarded for receipt control data entry.

D. MANUAL EDITING/CODING

It was determined that manual editing/coding should define simple procedures and that more complex editing steps and/or imputations should be left to the more efficient and accurate computer edit stage. Therefore, the manual editing/coding rules defined were principally to make provided responses more compatible with subsequent data entry operations. Editors/coders were trained and given a manual that completely specified general editing/coding rules for the basic item formats.

E. DATA ENTRY

Direct key-to-tape data entry was used for all returned questionnaires. Keying was controlled by data entry programs designed for the specific documents keyed (the three forms of questionnaires), and questionnaire design allowed keying of data directly from the hard copy documents (as edited/coded in the manual edit stage). All keyed data were 100 percent key verified.

F. MACHINE EDITING/CODING

The basic principles determining the machine processing of data were: (1) assurance of an accurate, magnetic transcription of the questionnaire responses and (2) production of a file that would provide flexibility for subsequent analytic decisions. Resolution of errors detected in processing took two basic forms. For cases in which error pattern or frequency suggested coding or keying error, hard copy documents were consulted. When resolution from hard copy was not suggested or realized, the data elements that were in error were appropriately "flagged" for identification during subsequent analysis.

G. WEIGHTING

A sampling weight was assigned to each member in the original sample to account for unequal selection probabilities; these weights were further adjusted for instrument nonresponse in an attempt to reduce, to the extent possible, potential bias resulting from such nonresponse. These adjusted weights were then used for estimating results for the total population of superintendents, principals, and teachers in the nation. Nonetheless, the estimates in this report are subject to both sampling and nonsampling error, and the reader is referred to Appendix C for a discussion of the reliability of reported estimates and their associated standard errors.

H. ADDITIONAL TECHNICAL DOCUMENTATION

The following publications provide complete detail and technical documentation pertaining to the SUS-83 survey design or methodology:

1. G.J. Burkheimer et al., School Utilization Study III: Study Protocol (Report No. RTI/2558/03-01F) (Research Triangle Park, N.C.: Research Triangle Institute, 1983).
2. G.J. Burkheimer et al., School Utilization Study III: Data Collection and Manual Processing Report (Report No. RTI/2558/03-02S) (Research Triangle Park, N.C.: Research Triangle Institute, 1983).
3. J.E. Richardson et al., Data Base Design for the School Utilization Study (Report No. RTI/2558/06-01F) (Research Triangle Park, N.C.: Research Triangle Institute, 1983).
4. G.J. Burkheimer et al., School Utilization Study III: Final Methodology Report (Report No. RTI/2558/03-03F) (Research Triangle Park, N.C.: Research Triangle Institute, 1983).

Appendix B

SUS-83 SURVEY INSTRUMENTS

The following instruments are *one-color* copies of the survey questionnaires that were used for the study. They were color-coded (beige for superintendents, blue for principals, and white for teachers) and were two-colored so that the instructions were easily differentiated from the rest of the questions.

In the following copies, the *unweighted* raw data are reported. For consistency, the number of valid responses for each question and the percentage distribution of responses are shown in parentheses next to the appropriate response categories. Numbers of respondents vary from question to question, and even item to item within a question, for two reasons: (1) the skip patterns found in the instruments, directing certain respondents away from inapplicable questions; and (2) item or subitem nonresponse.

The raw data might not match exactly weighted values given in the text and tables. The weighted values in the text are representative of the national population of superintendents, principals, and teachers. (See Appendix A for information about the transformation of raw to weighted data.)

School
Utilization
Study

1982-1983 Superintendent Questionnaire

Corporation for Public Broadcasting

1111 16th Street N.W.
Washington, D.C. 20036

Endorsed by:

American Association of School Administrators (AASA)

American Federation of Teachers (AFT)

Association for Educational Communications and Technology (AECT)

Council of Chief State School Officers (CCSSO)

National Association of Elementary School Principals (NAESP)

National Association of Secondary School Principals (NASSP)

National Catholic Educational Association (NCEA)

National Education Association (NEA)

National Public Radio (NPR)

Public Broadcasting Service (PBS)

Please Return Within One Week of Receipt

All information which would permit identification of the individual respondent will be held in strict confidence, will be used only by persons engaged in and for the purposes of the survey, and will not be disclosed or released to others for any purposes except as required by law.

DEFINITIONS

Throughout this questionnaire several terms are used repeatedly. For consistency in interpretation, here are their definitions:

Instructional Television (ITV): any in-school uses of television programming and equipment for instructional purposes.

Audio/Radio: any in-school uses of instructional programming and equipment using sound as the major medium (e.g., radio programs, records, sound film strips, audiotapes/cassettes).

Computer: any in-school uses of computer software and equipment (microcomputers or terminals connected to a central processor) used interactively by students for instructional purposes. Excluded is the use of computers for administrative purposes.

Other media: any in-school uses of other devices used for instructional purposes not included in the categories above (e.g., film, silent film strips, overheads).

SECTION A: GENERAL INFORMATION

Please supply the information in this section using school year 1982-83 figures. This information will be used for our recordkeeping and data analysis purposes only. Names and other identifying information will be available only to project staff and will not appear in any reports.

1. **Name of respondent** _____

   Title _____ **Telephone number** _____

2. **Circle ALL grades which are taught in your school district. (If ungraded, circle nearest grade equivalents.)**

   Pre-K K 1 2 3 4 5 6 7 8 9 10 11 12

3. **What was the total Average Daily Attendance (ADA) in your district on or about October 1, 1982? (Half-day nursery school or kindergarten attendance should be counted as half-time for determining ADA.) Round to the nearest whole number.**

   _____ ADA

4. **What will be the total current (1982-83) operating expenditures for your district, excluding capital outlay? (Include administration, instruction, attendance and health services, operation and maintenance of plant and fixed charges. Exclude capital expenditures and debt service.) Round to the nearest dollar.**

   $_____

5. **How much is the current operating expenditure per student, excluding capital outlay? (Use Average Daily Attendance (ADA) to compute per-student expenditure.) Round to the nearest dollar.**

   $_____ per-student expenditure

SECTION B: INSTRUCTIONAL TELEVISION (ITV)

6. **How is ITV available in schools in your district?** **(Circle as many as apply.)**

   a. Direct off-air broadcast from public television. 1
   b. Direct broadcast from commercial television. 2
   c. Cable television. 3
   d. Cassette or videotape 4
   e. Closed circuit system 5
   f. Master antenna system 6
   g. ITFS (Instructional Television Fixed Service) 7
   h. Don't know 8
   i. None of the above . . . . . 9 → *GO TO Q. 14*

   1–8 → *CONTINUE WITH Q. 7*

7. **How many television sets for instructional purposes are there in your district which are owned by the district (or state)?**

   _____ number of TV sets

8. **Does your school system have a systematic process for replacing old ITV equipment?**

(Circle one.)

No 1
Yes 2

9. **For each type of school listed below, please indicate:**

in Column A, the number of schools in your district;
in Column B, how many of these schools have at least one TV set which is available for instructional use;
in Column C, how many of those schools have at least one videotape/cassette recorder.

	A No. of Schools	B Schools with TV Sets	C Schools with Videotape/ Cassette
a. Elementary schools			
b. Middle schools and/or junior high schools			
c. High schools			
d. Other schools			
e. Total (unduplicated)			

10. **Does your district produce any of its own ITV programs?** (Circle as many as apply.)

a. No 1
b. Yes, for instructional use 2
c. Yes, for administrative use 3
d. Yes, for in-service training 4
e. Yes, for production experience for students 5
f. Yes, for teacher feedback of own performance 6
g. Yes, for student feedback of own performance 7

11. **When new buildings are planned for your district, do you typically incorporate facilities for TV into their design?**

(Circle one.)

No 1
Yes 2

12. **Have you done (or do you plan to do) any of the following?** (Circle as many as apply in each column.)

	Done During the Past 3 Years	Planned for the Next 3 Years
a. Increase the number of TV sets	1	1
b. Replace black and white TV sets by color	2	2
c. Add videotape/cassette equipment	3	3
d. Start a videotape/cassette library	4	4
e. Expand a videotape/cassette library	5	5
f. Acquire videodisc equipment	6	6
g. Add master antenna, cable TV or internal distribution systems	7	7
h. Add production equipment	8	8

13. **Does your district have or participate in one or more ITV Advisory Boards or similar bodies?**

(Circle one.)

No 1
Yes 2

SECTION C: AUDIO/RADIO

14. How is audio/radio instructional programming available in schools in your district?

(Circle as many as apply.)

a. Direct off-air over a public radio station 1
b. Direct off-air over a commercial station 2
c. On records 3
d. On audiotapes/cassettes 4
e. Other *(please specify)* _____ 5
f. Don't know 6

→ *CONTINUE WITH Q. 15*

g. None of the above . . . . . 7 → *GO TO Q. 17*

15. Does your school district own or operate a broadcast radio station? **(Circle as many as apply.)**

a. No 1
b. Yes, public radio (NPR) station 2
c. Yes, other non-commercial station 3
d. Yes, other *(please specify)* _____ 4

16. Is your district using audio/radio more this year than in the past 3 years? **(Circle one.)**

a. A lot more 1
b. A little more 2
c. About the same 3
d. A little less 4
e. A lot less 5

SECTION D: COMPUTERS

17. Please estimate the number of each type of computer currently (1982-83) owned by your district for interactive use by students for instructional purposes. *(If none, enter zero and go to Q. 20.)*

_____ number of microcomputers

_____ number of terminals connected to a central processor

18. For each type of school listed below, please indicate:

in Column A, the number of schools in your district that have at least one microcomputer which can be used for instruction;

in Column B, the number of schools in your district that have at least one terminal connected to a central processor which can be used for instruction.

	Number of schools with at least one: A Microcomputer	B Terminal
a. Elementary schools		
b. Middle schools and/or junior high schools		
c. High schools		
d. Other schools		

19. How are computers made available to teachers and students in your district? **(Circle as many as apply.)**

a. Centralized district-wide computer center 1
b. Located permanently in specific schools 2
c. Rotated among schools 3
d. Other *(please specify)* _____ 4

SECTION E: SUPPORT FOR INSTRUCTIONAL MEDIA

20. What will be the total current (1982-83) operating expenditures for instructional television, audio/radio, computers, and other media in your district? If exact figures are not available, please provide your best estimate.

a. **Total media budget (excluding textbooks)** . . . . . $ _____

b. **How is this budget allocated across media? (Estimate percentage for each medium.)**

(1) ITV . . . . . _____ %

(2) Audio/radio . . . . . _____ %

(3) Computers . . . . . _____ %

(4) Other media . . . . . _____ %

100%

21. How has district per capita financial support for the various instructional media listed below changed over the past 3 years?

(Circle one number in each column.)

	ITV	Audio/ Radio	Computers	Other Media
a. Support has increased	1	1	1	1
b. Support has remained about the same	2	2	2	2
c. Support has decreased	3	3	3	3
d. Don't know	4	4	4	4

22. Equipment funds for instructional media tend to come from the following agencies. Please indicate for your district approximately what percentage currently (1982-83 school year) comes from each source for each type of instructional medium.

	ITV	Audio/ Radio	Computers	Other Media
a. Federal programs	___ %	___ %	___ %	___ %
b. State programs	___ %	___ %	___ %	___ %
c. District-wide budget	___ %	___ %	___ %	___ %
d. School building budgets	___ %	___ %	___ %	___ %
e. Other *(please specify)* _____	___ %	___ %	___ %	___ %
	100%	100%	100%	100%

23. Does your district make available to your teachers in-service workshops on the use of instructional media?

(Circle all that apply.)

a. No . . . . . 1 → *GO TO Q. 25*

b. Yes, on the use of ITV 2

c. Yes, on the use of audio/radio 3

d. Yes, on the use of computers 4

e. Yes, on the use of other media 5

→ *CONTINUE WITH Q. 24*

24. From which agency do the personnel who usually conduct these workshops come?

(Circle as many as apply under each medium.)

	ITV	Audio/ Radio	Computers	Other Media
a. State Department of Education	1	1	1	1
b. School district	2	2	2	2
c. School building	3	3	3	3
d. Public TV station or network	4	4	4	4
e. University or college	5	5	5	5
f. Other *(please specify)* _____	6	6	6	6
g. Don't know	7	7	7	7
h. Not applicable	8	8	8	8

25. **Is there someone in your district who has district-wide responsibility for ITV?**

(Circle one.)

No . . . . . 1 ⟶ *GO TO Q. 29*
Yes . . . . . 2 ⟶ *CONTINUE WITH Q. 26*

26. **Approximately what percentage of that person's time is devoted to ITV?**

_____ %

27. **How many other persons does the district-wide ITV coordinator have on (ITV) staff?**

_____ number of other ITV staff

28. **Does the district-wide ITV coordinator also have responsibility for coordination of instructional computers?**

(Circle one.)

Yes . . . . . 1 ⟶ *GO TO Q. 30*
No . . . . . 2 ⟶ *CONTINUE WITH Q. 29*

29. **Is there someone in your district who has district-wide responsibility for instructional use of computers?**

(Circle one.)

No . . . . . 1 ⟶ *GO TO BOTTOM OF PAGE*
Yes . . . . . 2 ⟶ *CONTINUE WITH Q. 30*

30. **Approximately what percentage of that person's time is devoted to this responsibility?**

_____ %

31. **How many other persons does this person have on the (computer) staff?**

_____ number of other computer staff

Thank you very much for taking the time to fill out this questionnaire.

If you would like to receive a summary report of the findings of this study, check here _____ and supply us with your:

Name _____

Title _____

Address _____

_____

School
Utilization
Study

1982-1983 Principal Questionnaire

Corporation for Public Broadcasting

1111 16th Street N.W.
Washington, D.C. 20036

Endorsed by:

American Association of
School Administrators
(AASA)

American Federation
of Teachers
(AFT)

Association for Educational
Communications and
Technology (AECT)

Council of Chief
State School Officers
(CCSSO)

National Association of
Elementary School
Principals (NAESP)

National Association of
Secondary School
Principals (NASSP)

National Catholic
Educational Association
(NCEA)

National Education
Association
(NEA)

National Public
Radio
(NPR)

Public Broadcasting
Service
(PBS)

Please Return Within One Week of Receipt

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Other media: any in-school uses of other devices used for instructional purposes not included in the categories above (e.g., film, silent film strips, overheads).

SECTION A: GENERAL INFORMATION

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1. **Name of respondent (if not principal)** _____

   Title _____ **Telephone number** _____

2. **Circle all grades which are taught in your school. (If ungraded, circle nearest grade equivalents.)**

   Pre-K K 1 2 3 4 5 6 7 8 9 10 11 12

3. **What was the total Average Daily Attendance (ADA) student membership in your school on or about October 1, 1982? (Round to the nearest whole number.)**

   _____ ADA

4. **Please estimate the percentage of your students who come from families in the following categories. (Round to the nearest percent.)**

   a. Low income (under $10,000/year) . . . . . _____ %
   b. Low-middle income ($10,000–$20,000/year) . . . . . _____ %
   c. High-middle income ($20,001–$40,000/year) . . . . . _____ %
   d. High income (over $40,000/year) . . . . . _____ %
   100%

5. **How many teachers are there in your school? DO NOT INCLUDE non-teaching specialists, such as guidance counselor or nurse in your calculations.**

   _____ number of full-time teachers

   _____ number of part-time teachers

6. **Indicate the number of years that you have been a principal (at this or other schools) and the number of years you were in other education positions (including teaching and specialist).**

   a. Principal . . . . . _____ years
   b. Other education position . . . . . _____ years

SECTION B: INSTRUCTIONAL TELEVISION (ITV)

7. **How is ITV available in your school building?** **(Circle as many as apply.)**

   a. Direct off-air broadcast from public television. 1
   b. Direct broadcast from commercial television. 2
   c. Cable television. 3
   d. Videotape/cassette. 4
   e. Videodisc. 5
   f. Closed circuit system 6
   g. Master antenna system 7
   h. ITFS (Instructional Television Fixed Service) 8
   i. Don't know . . . . . 9 → *CONTINUE WITH Q. 8*
   j. None of the above . . . . . 10 → *GO TO Q. 14*

8. **How many television sets for instructional purposes are there in your school which are owned by the school (or district or state)?**

a. Number of black and white sets . . . . . _____

b. Number of color sets . . . . . _____

c. Total number of sets . . . . . _____

9. **Which best describes the location of TV sets in your school?** **(Circle one.)**

a. Kept and used in specific classrooms, except for maintenance and repair 1
b. Kept and used in the media center or library 2
c. Rotated among classrooms on request 3
d. Kept and used in large rooms or auditorium 4
e. Other *(please specify)* _____ 5

10. **Which of the following are available in your school?** **(Circle as many as apply.)**

a. Earphones for the TV set 1
b. Easy access to requested TV programs (dial-own-access TV) 2
c. TV studio in the school 3
d. Videotape/cassette library in the school 4
e. Videotape/cassette library in the district 5
f. Videotape/cassette provided by intermediate unit or regional library 6
g. None of the above 7

11. **How many videotape/cassette recorders/players are available for instructional purposes in your school?** *(If none, enter zero and go to Q. 13.)*

_____ number of recorders/players

12. **What types of videotape/cassette recorders/players are available in your school?** **(Circle as many as apply.)**

a. ½-inch Beta format 1
b. ½-inch VHS format 2
c. ¾-inch (U-Matic) 3
d. Other *(please specify)* _____ 4

13. **Does your school produce any original TV programs for school use?** **(Circle as many as apply.)**

a. No 1
b. Yes, for instructional use 2
c. Yes, for administrative use 3
d. Yes, for in-service training 4
e. Yes, for production experience for students 5
f. Yes, for teacher feedback of own performance 6
g. Yes, for student feedback of own performance 7

SECTION C: AUDIO/RADIO

14. **How is audio/radio available in your school building?** **(Circle as many as apply.)**

a. Direct off-air over a public radio station 1
b. Direct off-air over a commercial station 2
c. On records 3
d. On audiotapes/cassettes 4
e. Over a public address or other central distribution system 5
f. Other *(please specify)* _____ 6
g. Don't know 7

→ *CONTINUE WITH Q. 15*

h. None of the above . . . . . 8 → *GO TO Q. 18*

15. **How many radios and audiotape/cassette machines for instructional purposes are available in your school?**

_____ number of radios

_____ number of audiotape/cassette machines

16. **Is audio/radio being used in your school more this year than in the past 3 years?** (Circle one.)

a. A lot more 1
b. A little more 2
c. About the same 3
d. A little less 4
e. A lot less 5

17. **From what sources do your teachers obtain instructional audiocassettes and/or records for use in their classrooms?** (Circle as many as apply.)

a. School building 1
b. School district 2
c. Intermediate unit or regional library 3
d. State 4
e. Record their own 5
f. Commercial sources (direct mail ordering) 6
g. National Public Radio Cassette Catalogue 7
h. Other *(please specify)* _____ 8
i. None of the above 9

SECTION D: COMPUTERS

18. **For each type of computer listed below, please indicate:**
in Column A, the number of computers currently available in your school building for instructional purposes;
in Column B, the number you expect to add next year. *If none enter zero.*

	A Number Currently Have	B Number Plan to Acquire in 1983-84
a. Terminals (connected to a central processing unit)		
b. Apple		
c. Atari		
d. Commodore		
e. IBM Personal Computer		
f. Radio Shack		
g. Texas Instruments		
h. Other microcomputer *(please specify)* _____		

IF YOU DO NOT CURRENTLY HAVE ANY COMPUTER EQUIPMENT, GO TO Q. 29

19. **What best describes the location of computer hardware in your building?** (Circle as many as apply.)

a. Kept and used in specific classrooms, except for maintenance and repair 1
b. Rotated among classrooms on request 2
c Kept and used in media center or library 3
d. Kept and used in "computer center" separate from media center or library 4
e. Other *(please specify)* _____ 5

20. **Is a person in your school building responsible for coordinating computer use?** (Circle one.)

No . . . . . 1 → *GO TO Q. 25*
Yes . . . . . 2 → *CONTINUE WITH Q. 21*

21. **What percentage of his/her time is devoted to coordinating instructional computer use?**

_____ %

22. **Does he/she have specific training in instructional computer use?** (Circle one.)

No 1
Yes 2

23. What other responsibilities does this person have? (Circle as many as apply.)

a. None . . . 1
b. Administrative . . . 2
c. Teaching . . . 3
d. Library . . . 4
e. Audio/radio . . . 5
f. Other media . . . 6
g. Other responsibility *(please specify)* _____ . . . 7

24. Is the person the same one who has responsibility for ITV at your building? (Circle one.)

a. No, a different person . . . 1
b. Yes, the same person . . . 2
c. There is no ITV coordinator . . . 3

25. How are computers currently used for instruction in your school? (Circle as many as apply.)

a. For remedial instruction for regular classroom students . . . 1
b. Regular instruction in specific subject areas for all students . . . 2
c. Enrichment in specific subject areas . . . 3
d. Challenge use for high achievers . . . 4
e. Computer literacy (e.g., introduction to computer concepts) . . . 5
f. Computer applications (e.g., word processing or advanced problem solving) . . . 6
g. Computer programming . . . 7
h. Instruction for Special Education students . . . 8
i. Bilingual instruction . . . 9
j. Other *(please specify)* _____ . . . 10

26. From the list in Q. 25 above, select the one response which indicates how computers are most used in your school and write the corresponding number (1-10): _____

27. Which of the following methods of facilitating computer instruction are you currently using or planning? (Circle as many as apply in each column.)

	Currently Using	Not Currently Using But Planning to Use
a. A group designated to select instructional computer programs/materials	1	1
b. A group designated to write instructional computer programs/materials	2	2
c. A resource support group of teachers to provide technical or instructional assistance to other teachers	3	3
d. Volunteer parent group for assistance to teachers and students	4	4
e. In-service teacher training	5	5
f. Other *(please specify)* _____	6	6

28. How do you feel about the following statements about computers? (Circle one number on each line.)

	Strongly Agree	Agree	Disagree	Strongly Disagree	No Opinion
a. Selection of appropriate hardware is difficult	1	2	3	4	5
b. Schools need help in planning for the changing role of teachers which is being brought about by the new electronic learning media	1	2	3	4	5
c. I do not feel comfortable about working with computers	1	2	3	4	5
d. The software available to my building is quite good instructionally	1	2	3	4	5
e. My teachers want more training in computers	1	2	3	4	5
f. Principals need help in software acquisition (finding best prices, determining what the product will do)	1	2	3	4	5
g. The emphasis on computers is detracting seriously from the overall educational goals of the schools	1	2	3	4	5
h. The present computer-to-student ratio precludes significant instructional use of computers	1	2	3	4	5

SECTION E: SUPPORT FOR INSTRUCTIONAL MEDIA

29. Is there a person in your school building responsible for coordinating ITV? (Circle one.)

No . . . . . 1 → *GO TO Q. 33*
Yes . . . . . 2 → *CONTINUE WITH Q. 30*

30. Does he/she have specific training in media? (Circle one.)

No 1
Yes 2

31. What other responsibilities does this person have? (Circle as many as apply.)

a. None 1
b. Administrative 2
c. Teaching 3
d. Library 4
e. Audio/radio 5
f. Computers 6
g. Other media 7
h. Other responsibility *(please specify)*_____ 8

32. What types of services are provided by the ITV coordinator? (Circle as many as apply.)

a. Distributes teacher guides 1
b. Provides newsletters or other information 2
c. Calls attention to special programs 3
d. Provides assistance with equipment 4
e. Provides training/consultation 5
f. Works with subgroups of students 6
g. Records programs for teachers upon request 7

33. Generally speaking, which best describes district practice regarding the use of the various instructional technologies listed below? (Circle one number in each column.)

	ITV	Audio/ Radio	Computers	Other Media
a. Use is strongly encouraged	1	1	1	1
b. Use is encouraged but left to discretion of individual schools and teachers	2	2	2	2
c. Use is neither encouraged nor discouraged	3	3	3	3
d. Use is discouraged but left to discretion of individual schools and teachers	4	4	4	4
e. Use is strongly discouraged	5	5	5	5

34. In which of the following have you had training? (Circle as many as apply.)

a. ITV 1
b. Audio/radio 2
c. Computers 3
d. Other media (e.g., film, graphics, models) 4
→ *CONTINUE WITH Q. 35*
e. None of the above . . . . . 5 → *GO TO Q. 37*

35. How was the training conducted? (Circle as many as apply under each medium.)

	ITV	Audio/ Radio	Computers	Other Media
a. Pre-service (undergraduate)	1	1	1	1
b. Graduate or continuing education	2	2	2	2
c. District in-service	3	3	3	3
d. Televised in-service series	4	4	4	4
e. Workshop by local public TV station	5	5	5	5
f. State Department of Education in-service	6	6	6	6
g. Workshops at professional meetings	7	7	7	7
h. Self-taught	8	8	8	8
i. No training	9	9	9	9

36. Have you received training in any of these instructional media within the last 3 years?

(Circle one under each medium)

	ITV	Audio/ Radio	Computers	Other Media
No	1	1	1	1
Yes	2	2	2	2

37. Equipment funds for various instructional media tend to come from the sources listed below. For your school building, please indicate for the current school year approximately what percent comes from each source for each type of medium.

	ITV	Audio/ Radio	Computers	Other Media
a. Federal programs	___ %	___ %	___ %	___ %
b. State programs	___ %	___ %	___ %	___ %
c. District budget	___ %	___ %	___ %	___ %
d. School building budget	___ %	___ %	___ %	___ %
e. Other *(please specify)* _____	___ %	___ %	___ %	___ %
	100%	100%	100%	100%

Thank you very much for taking the time to fill out this questionnaire.

If you would like to receive a summary report of the findings of this study, check here _____ and supply us with your:

Name _____

Title _____

Address _____

_____

School
Utilization
Study

1982-1983 Teacher Questionnaire

Corporation for Public Broadcasting

1111 16th Street N.W.
Washington, D.C. 20036

Endorsed by:

American Association of School Administrators (AASA)

American Federation of Teachers (AFT)

Association for Educational Communications and Technology (AECT)

Council of Chief State School Officers (CCSSO)

National Association of Elementary School Principals (NAESP)

National Association of Secondary School Principals (NASSP)

National Catholic Educational Association (NCEA)

National Education Association (NEA)

National Public Radio (NPR)

Public Broadcasting Service (PBS)

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Other media: any in-school uses of other devices used for instructional purposes not included in the categories above (e.g., film, silent film strips, overheads).

SECTION A: BACKGROUND INFORMATION

1. Circle all grades which you teach this year. (If ungraded, circle nearest grade equivalents.)

Pre-K K 1 2 3 4 5 6 7 8 9 10 11 12

2. How many students do you teach? (If you teach more than one class, indicate in column (a) the number of students you teach in all classes and in column (b) the number of classes you teach.)

a. Total number of students _____ b. Number of classes _____

3. Which best describes the setting in which you teach? **(Circle one.)**

a. Teacher has control over the class time schedule, determining the order of instructional activities during large blocks of the school day 1

b. Teacher's schedule is largely predetermined by a master building schedule. The "clock" signals the beginnings and endings of periods of time with a given group of students 2

4. How many years (including this year) have you taught?

_____ years

5. In which of the following have you ever had training? **(Circle as many as apply.)**

a. ITV 1
b. Audio/radio 2
c. Computers 3
d. Other media (e.g., film) 4
e. None of the above . . . . . 5 → *GO TO Q. 8*

CONTINUE WITH Q. 6

6. How was the training conducted? **(Circle as many as apply under each medium.)**

	ITV	Audio/ Radio	Computers	Other Media
a. Pre-service (undergraduate)	1	1	1	1
b. Graduate or continuing education	2	2	2	2
c. Required (in-service) workshop	3	3	3	3
d. Self-selected (in-service) workshop	4	4	4	4
e. Self-taught	5	5	5	5
f. No training	6	6	6	6

7. Have you received training in any of these instructional media within the last 3 years?

(Circle one under each medium.)

	ITV	Audio/ Radio	Computers	Other Media
No	1	1	1	1
Yes	2	2	2	2

8. **Generally speaking, which best describes the practice of your building administrator(s) regarding the use of each medium?**

(Circle one under each medium.)

	ITV	Audio/ Radio	Computers	Other Media
a. Strongly encourage use	1	1	1	1
b. Encourage use but leave to discretion of individual teacher	2	2	2	2
c. Neither encourage nor discourage use	3	3	3	3
d. Discourage use but leave to discretion of individual teacher	4	4	4	4
e. Strongly discourage use	5	5	5	5

SECTION B: INSTRUCTIONAL TELEVISION

9. **Is ITV programming available for you to use with any of your classes?** (Circle one.)

No . . . 1
Yes . . . 2

10. **What kind of TV sets do you have available to use with your classes?** (Circle one.)

a. None . . . 1 → *GO TO Q. 28*
b. Black and white . . . 2
c. Color . . . 3 → *CONTINUE WITH Q. 11*
d. Both B/W and color . . . 4

11. **Rate each of the following with respect to how frequently it presents a difficulty in using ITV.**

(Circle only one on each line.)

	Often	Sometimes	Seldom	Never
a. Finding out about programs in advance	1	2	3	4
b. Having programs available when I need them	1	2	3	4
c. Quality of programs in my subject areas	1	2	3	4
d. Having equipment available when I need it	1	2	3	4
e. Having equipment in good condition	1	2	3	4

12. **If you want to record a program "off-air" and play it back for your class later, how is the recording accomplished?**

(Circle as many as apply.)

a. I record it at home . . . 1
b. I record it at school . . . 2
c. I request it to be done by other school personnel . . . 3
d. I have no resource to record "off-air" . . . 4
e. I have never wanted to record "off-air" . . . 5

13. **Do you use ITV this year (1982-83)?** (Circle one.)

No . . . 1 → *GO TO Q. 28*
Yes . . . 2 → *CONTINUE WITH Q. 14*

14. **Please indicate the subjects for which you used ITV this school year.** (Circle as many as apply.)

Art	1	Language arts other than reading	10
Career/vocational education	2	Math	11
Computer science	3	Music	12
English as a second language	4	Physical education	13
Foreign language	5	Reading	14
Guidance	6	Science	15
Health/nutrition	7	Social sciences	16
Home economics	8	Special education	17
Industrial education	9	Other *(please specify)* _____	18

15. **From the list in Q. 14, select the one subject in which new ITV programming is most needed and write the corresponding number (1-18) below.**

16. When choosing programming for your class, which do you prefer most? (Circle one.)

a. Full semester and/or year-long series 1
b. Mini-series 2
c. Selected programs from series 3

17. How many <u>different</u> ITV series do you <u>use regularly</u> (i.e., 75% or more of all lessons in the series) in this school year (1982-83)? *(If none, enter zero.)*

_____ number of ITV series

18. In Column A, indicate the titles of the series from which you are using or have used programs this year;
In Column B, indicate how many of your students viewed each one;
In Column C, indicate whether these series were used at the time they were broadcast (off-air); and
In Column D, indicate whether these series were used as videotape/cassette.

(Circle as many as apply in each column.)

A Title of Series	B No. of Students	C Used at Time of Broadcast (off-air)	D Used as Videotape/Cassette
_____	_____	1	1
_____	_____	2	2
_____	_____	3	3
_____	_____	4	4
_____	_____	5	5
_____	_____	6	6

19. Various arrangements can be made to use ITV. Which describe(s) the arrangements you use?

(Circle as many as apply.)

a. Class views program with another class or classes 1
b. Entire class views program without other class(es) 2
c. Small group(s) from the class view program 3
d. Individual students are assigned to view programs 4

20. How long do you typically spend discussing (or otherwise preparing for) lessons in the series in class before the class views them?

_____ minutes

21. How long do you typically spend discussing (or otherwise following up) on lessons in the series in class after the class views them?

_____ minutes

22. Are teacher guides for ITV distributed in your school? (Circle one.)

No 1
Yes 2

23. Do you typically use suggestions from the teacher guide in preparing for or following up on the programs?

(Circle one.)

No 1
Yes 2

24. How often are other classroom assignments related to content in ITV programs? (Circle one.)

a. Always 1
b. Most of the time 2
c. Some of the time 3
d. Seldom 4
e. Never 5

25. Of the time you view ITV in the classroom in a typical week this year, about how much time is spent on these different kinds of programming? (If you teach more than one group of students, answer for the total cumulative amount of time you use ITV.)

(Circle one number on each line.)

	Time per Week					
	None	¼ Hour	½ Hour	1 Hour	2 to 4 Hours	5 or More Hours
a. Watching programs from ITV series (e.g., *All About You, Inside/Out*)	1	2	3	4	5	6
b. Watching programs from general public television (e.g., *Mister Rogers, MacNeil-Lehrer Report, National Geographic*)	1	2	3	4	5	6
c. Watching programs on commercial television (e.g., *60 Minutes, After School Specials*)	1	2	3	4	5	6
d. Other ITV programs	1	2	3	4	5	6

26. Which of the following outcomes have you personally seen in your class(es) which you would attribute to ITV?

(Circle all that apply.)

a. Students learn more when I use ITV . . . 1
b. Students comprehend and discuss content and ideas presented in ITV . . . 2
c. Students use new vocabulary included in ITV . . . 3
d. Students have followed up ideas mentioned in ITV . . . 4
e. Students are more enthusiastic about school work in general . . . 5
f. Students use library more . . . 6
g. Students watch more educational TV at home . . . 7
h. Students prefer ITV over other classroom media . . . 8
i. Other *(please specify)* _____ . . . 9

27. Are you using ITV more or less this year than you have in the past 3 years? (Circle one.)

a. A lot more . . . 1
b. A little more . . . 2
c. About the same . . . 3
d. A little less . . . 4
e. A lot less . . . 5

SECTION C: AUDIO/RADIO

28. Is audio/radio programming (e.g., radio programs, records, sound film strips, audiotapes/cassettes) available for use with your classes?

(Circle one.)

No . . . 1 ⟶ *GO TO Q. 33*
Yes . . . 2 ⟶ *CONTINUE WITH Q. 29*

29. How is audio/radio programming available? (Circle as many as apply.)

a. Directly off-air over a public radio station . . . 1
b. Directly off-air over a commercial station . . . 2
c. On records . . . 3
d. On audiotapes/cassettes . . . 4
e. Over a public address or other central distribution system . . . 5
f. Other *(please specify)* _____ . . . 6

30. Do you use audio/radio this year? (Circle one.)

No . . . 1 ⟶ *GO TO Q. 33*
Yes . . . 2 ⟶ *CONTINUE WITH Q. 31*

31. **When you use audio/radio in a typical week, how much time is spent using the following? (If you teach more than one group of students, answer for the total cumulative amount of time you use audio/radio.)**

(Circle one number on each line.)

	Time per Week					
	None	¼ Hour	½ Hour	1 Hour	2 to 4 Hours	5 or more Hours
a. Directly off the air	1	2	3	4	5	6
b. On records	1	2	3	4	5	6
c. On audiotapes/cassettes	1	2	3	4	5	6
d. Other *(please specify)* _____	1	2	3	4	5	6

32. **Are you using audio/radio more or less this year than you have in the past 3 years?** (Circle one.)

a. A lot more . . . 1
b. A little more . . . 2
c. About the same . . . 3
d. A little less . . . 4
e. A lot less . . . 5

SECTION D: COMPUTERS

33. **Are computers available for use with your classes?** (Circle one.)

No . . . 1 ⟶ *GO TO Q. 42*
Yes . . . 2 ⟶ *CONTINUE WITH Q. 34*

34. **How many computers are available for your use?** _____ terminals

_____ microcomputers

35. **What kind of software is available for instructional use with your students? (Circle as many as apply.)**

a. Drill and practice . . . 1
b. Tutorial . . . 2
c. Simulation . . . 3
d. Games . . . 4
e. Languages for programming . . . 5
f. Graphics . . . 6
g. Word processing . . . 7
h. Computation or statistical . . . 8
i. Testing and evaluation . . . 9
j. Other *(please specify)* _____ . . . x
k. Don't know . . . 11

36. **What best describes the location of computer hardware in your building?** (Circle as many as apply.)

a. Kept and used in specific classrooms, except for maintenance and repair . . . 1
b. Rotated among classrooms . . . 2
c. Kept and used in media center or library . . . 3
d. Kept and used in "computer center" separate from media center or library . . . 4
e. Other *(please specify)* _____ . . . 5

37. **Is there a person in your school building who provides advice and support for computer use?** (Circle one.)

No . . . 1 ⟶ *GO TO Q. 39*
Yes . . . 2 ⟶ *CONTINUE WITH Q. 38*

38. **What types of services are provided by this person?** (Circle as many as apply.)

a. Provides assistance with equipment . . . 1
b. Provides training/consultation . . . 2
c. Works with subgroups of students . . . 3
d. Calls attention to available software . . . 4
e. Calls attention to resources (workshops, printed material, etc.) . . . 5

39. **Are you using computers with your class(es) this year?** (Circle one.)

No . . . 1 ⟶ *GO TO Q. 42*
Yes . . . 2 ⟶ *CONTINUE WITH Q. 40*

40. For which of the following instructional purposes have you used the computer? **(Circle as many as apply.)**

a. For remedial instruction for regular classroom students 1
b. Regular instruction in specific subject areas for all students 2
c. Enrichment in specific subject areas 3
d. Challenge use for high achievers 4
e. Computer literacy (e.g., introduction to computer concepts) 5
f. Computer applications (e.g., word processing or advanced problem solving) 6
g. Computer programming 7
h. Instruction for Special Education students 8
i. Bilingual instruction 9
j. Other *(please specify)* _____ 10

41. In a typical week how much time, on the average, would a student in your class use the computer for instruction? *If you did not have the computer available all year and, therefore, not during the typical week, enter zero and check here* ☐.

_____ minutes

42. How do you feel about the following statements? **(Circle one number on each line.)**

	Strongly Agree	Agree	Disagree	Strongly Disagree	No Opinion
a. Computers can help teachers teach more effectively	1	2	3	4	5
b. Having one or two students work at a computer is seriously disruptive to the rest of my classroom activity	1	2	3	4	5
c. I want more training in computers	1	2	3	4	5
d. The software available to me is quite good instructionally	1	2	3	4	5
e. I do not feel comfortable about working with computers	1	2	3	4	5
f. Previewing software should be done by teachers before purchase	1	2	3	4	5
g. Integrating computer time with other subject areas is a fairly simple matter	1	2	3	4	5
h. The hardware, or equipment, is difficult to use	1	2	3	4	5

SECTION E: PERSONAL USE OF MEDIA

43. Do you have a TV set in your home? **(Circle one.)**

No . . . . . 1 ——→ *GO TO Q. 45*
Yes . . . . . 2 ——→ *CONTINUE WITH Q. 44*

44. Please estimate the number of hours you personally watch TV at home each week. _____ hours per week

45. Do you own or plan to buy a personal (home) computer? **(Circle one.)**

a. Own 1
b. Do not own, but plan to buy 2
c. Do not own; do not plan to buy 3

Thank you very much for taking the time to fill out this questionnaire

If you would like to receive a summary report of the findings of this study, check here _____ **and supply us with your:**

Name _____

Address _____

_____

Appendix C

RELIABILITY OF ESTIMATES

The statistics provided in this summary report are estimates derived from a sample survey. Two types of errors, sampling and nonsampling, are possible in such estimates, and the joint effects of these errors determine the accuracy of a survey result. Nonsampling errors can be attributed to many sources:

- inability to obtain information about all cases in the sample,
- definitional difficulties,
- differences in the interpretation of questions,
- respondents' inability or unwillingness to provide correct information,
- mistakes in recording or coding data, and
- other errors of collection, response, processing, coverage, and estimation for missing data.

Nonsampling errors also occur in complete censuses.

Because the estimates reported are based on a probability sample of population rather than the entire population, they are subject to sampling variability. The particular sample used in this survey is one of a large number of possible samples that could have been selected using the same sample design. Estimates derived from the different possible samples would differ from each other. The standard error of a survey estimate is a measure of the reliability of the estimate. More specifically, it is a measure of the variation among the estimates from all possible surveys. Thus, the standard error is a measure of the precision with which an estimate from a

Table C.1 GENERALIZED STANDARD ERRORS FOR DISTRICT-LEVEL QUESTIONS

	Percentage									
Sample Size	1 99	5 95	10 90	20 80	25 75	30 70	35 65	40 60	45 55	50 50
525	.702	1.54	2.12	2.82	3.05	3.23	3.36	3.45	3.51	3.53
475	.738	1.62	2.22	2.97	3.21	3.40	3.54	3.63	3.69	3.71
425	.780	1.71	2.35	3.13	3.39	3.59	3.74	3.84	3.90	3.92
375	.830	1.82	2.50	3.34	3.61	3.82	3.98	4.09	4.15	4.17
325	.892	1.95	2.69	3.58	3.88	4.11	4.27	4.39	4.46	4.48
275	.969	2.12	2.92	3.90	4.22	4.46	4.65	4.77	4.85	4.87
225	1.07	2.35	3.23	4.31	4.66	4.94	5.14	5.28	5.36	5.39
175	1.22	2.66	3.66	4.88	5.29	5.60	5.82	5.98	6.08	6.11
125	1.44	3.15	4.33	5.78	6.26	6.62	6.89	7.08	7.19	7.22
25	3.21	7.04	9.69	12.9	14.0	14.8	15.4	15.8	16.1	16.2

Table C.2 GENERALIZED STANDARD ERRORS FOR SCHOOL-LEVEL QUESTIONS

	Percentage									
Sample Size	1 99	5 95	10 90	20 80	25 75	30 70	35 65	40 60	45 55	50 50
1100	.466	.977	1.34	1.79	1.94	2.05	2.14	2.20	2.23	2.24
1000	.468	1.02	1.41	1.88	2.04	2.15	2.24	2.30	2.34	2.35
900	.493	1.08	1.49	1.98	2.15	2.27	2.36	2.43	2.47	2.48
800	.523	1.15	1.58	2.10	2.28	2.41	2.51	2.57	2.61	2.63
700	.559	1.22	1.69	2.25	2.43	2.57	2.68	2.75	2.80	2.81
600	.604	1.32	1.82	2.43	2.63	2.78	2.89	2.97	3.02	3.03
500	.661	1.45	1.99	2.66	2.88	3.05	3.17	3.26	3.31	3.32
400	.740	1.62	2.23	2.97	3.22	3.41	3.55	3.64	3.70	3.72
300	.854	1.87	2.57	3.43	3.72	3.93	4.09	4.20	4.27	4.29
200	1.05	2.29	3.15	4.20	4.55	4.82	5.01	5.15	5.23	5.26
100	1.48	3.24	4.46	5.95	6.44	6.81	7.09	7.28	7.40	7.43
50	2.09	4.58	6.31	8.41	9.10	9.63	10.0	10.3	10.5	10.5

Table C.3 GENERALIZED STANDARD ERRORS FOR CLASSROOM-LEVEL QUESTIONS

Sample Size	Percentage									
	1 99	5 95	10 90	20 80	25 75	30 70	35 65	40 60	45 55	50 50
2000	.325	.713	.981	1.31	1.42	1.50	1.56	1.60	1.63	1.64
1800	.343	.751	1.03	1.38	1.49	1.58	1.64	1.69	1.72	1.72
1600	.364	.797	1.10	1.46	1.58	1.68	1.74	1.79	1.82	1.83
1400	.389	.852	1.17	1.56	1.69	1.79	1.86	1.92	1.95	1.95
1200	.420	.920	1.27	1.69	1.83	1.94	2.01	2.07	2.10	2.11
1000	.460	1.01	1.39	1.85	2.00	2.12	2.21	2.27	2.30	2.31
800	.515	1.13	1.55	2.07	2.24	2.37	2.47	2.53	2.57	2.59
600	.594	1.30	1.79	2.39	2.59	2.74	2.85	2.93	2.97	2.99
400	.728	1.59	2.19	2.93	3.17	3.35	3.49	3.58	3.64	3.66
200	1.03	2.25	3.10	4.14	4.48	4.74	4.93	5.07	5.15	5.17
100	1.46	3.19	4.39	5.85	6.33	6.70	6.98	7.17	7.28	7.31
50	2.06	4.51	6.21	8.28	8.96	9.48	9.87	10.1	10.3	10.3

particular sample approximates the average result of all possible samples.

Tables of generalized standard errors for SUS-83 estimates presented in this report appear in Tables C.1, C.2, and C.3, for superintendents, principals, and teachers, respectively. These tables give approximate standard errors as a joint function of the estimated percentage (given as column headings) and the total sample size on which the percentage is based (given as row headings). For example, the generalized standard error (from Table C.1) for an estimate of 20 percent of an analysis group composed of 375 superintendents is given as 3.34 percentage points. The actual sample sizes on which the reported percentages are based are given in tables in the text (or in Appendix D).

In many cases, the reported percentage, the sample size on which the percentage is based, or both will fall within the intervals established in the generalized standard error tables, for example, 23 percent, or a sample size of 75. For most purposes, it will be sufficient in such cases simply to "eyeball" the appropriate table and estimate the standard error to the nearest whole percent. If more precise standard errors are required, however, such cases will require the investigator to interpolate. The procedure required is illustrated by the following example.

Given a SUS-83 district-level estimate of 90 percent based on a sample size of 140 respondents, the standard error of the percentage, σ_P, can be determined by interpolation of Table C.1 using the following formula:

$$\sigma_P = \sigma_{P(LN)} - \left[\left(\frac{N-LN}{HN-LN}\right)\left(\sigma_{P(LN)} - \sigma_{(HN)}\right)\right]$$

where: N is the sample size on which the percentage is based,

LN is the low end of the sample size interval within which N falls,

HN is the high end of the sample size interval within which N falls,

$\sigma_{P(LN)}$ is the standard error associated with LN for the percentage, and

$\sigma_{P(HN)}$ is the standard error associated with HN for the percentage.

Now, solving for the above example:

$$\sigma_P = 4.33 - \left[\left(\frac{140-125}{175-125}\right)\left(4.33-3.66\right)\right]$$

$$\sigma_P = 4.33 - [(.30)(.67)]$$

$$\sigma_P = 4.13.$$

The sample estimate and an estimate of its standard error together permit the construction of interval estimates such that, with a prescribed confidence, the interval includes the average result of all possible samples selected and surveyed under essentially the same conditions. With these interval estimates:

- In approximately two thirds of the possible samples, intervals from one standard error below the estimate to one standard error above the estimate would include the average value of all possible samples. Such an interval is called a "67-percent confidence interval."
- Approximately 19/20 of the possible sample intervals from two standard errors below the estimate to two standard errors above the estimate would include the average value of all possible samples. Such an interval is called a "95-percent confidence interval."
- For almost all the possible samples, the interval from three standard errors below the estimate to three standard errors above the estimate would include the average value of all possible samples.

In general, estimates for small subgroups tend to be relatively unreliable. However, the magnitude of the sampling error that is tolerable depends on the conclusions being drawn. The reader should be aware that some estimates in this report may have relatively large standard errors. Statistics with such standard errors are generally viewed as not precisely estimated and should be interpreted cautiously.

Confidence intervals can also be constructed (or statistical tests performed) for differences in percentages. Given the standard error for a percentage in group A, $\sigma(P_A)$, and that for an analogous percentage in group B, $\sigma(P_B)$, a typically conservative standard error for the difference, $P_A - P_B$, is given by

$$\sigma_{(P_A - P_B)} = \sqrt{\{\sigma_{(P_A)}\}^2 + \{\sigma_{(P_B)}\}^2}$$

If the 95 percent confidence interval—the interval defined by $(P_A - P_B) \pm 2\sigma_{(P_A - P_B)}$—does not include zero, then the difference may be taken as a real one at the .05 level of statistical significance. This test was performed for all comparisons between SUS-77 and SUS-83 estimates reported in Section VI of the text.

Appendix D

SUPPORTING TABLES FOR REPORTED RESULTS

To enhance readability, certain tabular presentations in the summary report do not contain information on the number of sample cases contributing to the statistics reported. That information is provided in this appendix and so noted in the particular tables in the text, to allow identification of appropriate standard errors by using the generalized standard error tables in Appendix C. To facilitate such efforts, the table numbers in this appendix correspond directly to those presented in the text (Table D.1 corresponds to Table 1, Table D.2 to Table 2, etc.).

Table D.1 NUMBER OF CASES ON WHICH ESTIMATES IN TABLE 1 ARE BASED

		Size of District				
Medium	Total	0-2,499	2,500-4,999	5,000-9,999	10,000-24,999	25,000 and over
ITV	515	125	92	96	94	108
Audio/radio	498	125	88	93	90	102
Computers	505	129	93	92	91	100

Table D.2 NUMBER OF CASES ON WHICH ESTIMATES IN TABLE 2 ARE BASED

		Wealth of District			
Medium	Total	0-$1,900	$1,901-2,301	$2,302-2,736	$2,737 and over
ITV	467	118	118	117	114
Audio/radio	451	114	114	113	110
Computers	462	115	115	119	113

Table D.5 NUMBER OF CASES ON WHICH ESTIMATES IN TABLE 5 ARE BASED

		Size of District				
School Level	Total	0-2,499	2,500-4,999	5,000-9,999	10,000-24,999	25,000 and over
Elementary	441	96	78	91	80	96
Middle/junior	392	76	72	85	71	88
Senior high	428	88	80	87	78	95
Other	143	7	8	22	44	62
All schools	302	58	57	60	53	74

Table D.6 NUMBER OF CASES ON WHICH ESTIMATES IN TABLE 6 ARE BASED

School Level	Total	Wealth of District			
		0-$1,900	$1,901-2,301	$2,302-2,736	$2,737 and over
Elementary	427	104	111	98	11
Middle/junior	393	92	97	96	10
Senior high	413	94	109	100	112
All schools	303	68	81	73	81

Table D.7 NUMBER OF CASES ON WHICH ESTIMATES IN TABLE 7 ARE BASED

School Level	Total	Size of District				
		0-2,499	2,500-4,999	5,000-9,999	10,000-24,999	25,000 and over
Elementary	412	89	77	90	73	83
Middle/junior	372	69	72	84	70	77
Senior high	415	85	81	88	76	85
All schools	296	59	58	61	51	67

Table D.8 NUMBER OF CASES ON WHICH ESTIMATES IN TABLE 8 ARE BASED

School Level	Total	Wealth of District			
		0-$1,900	$1,901-2,301	$2,302-2,736	$2,737 and over
Elementary	401	93	104	94	110
Middle/junior	373	85	94	92	102
Senior high	403	90	105	99	109
All schools	298	64	81	75	78

Table D.20 NUMBER OF CASES ON WHICH ESTIMATES IN TABLE 20 ARE BASED

Medium	Total	Elementary school	Middle/junior high school	Senior high school
ITV	1,091	543	269	279
Audio/radio	1,082	541	261	280
Computers	969	445	249	275

Table D.22 NUMBER OF CASES ON WHICH ESTIMATES IN TABLE 22 ARE BASED

Equipment	Total	Elementary school	Middle/junior high school	Senior high school
Teachers per television set	943	467	227	249
Teachers per videotape/ cassette recorder	725	304	197	224

Table D.27 NUMBER OF CASES ON WHICH ESTIMATES IN TABLE 27 ARE BASED

Equipment	Total	Elementary school	Middle/junior high school	Senior high school
Teachers per radio	640	330	150	160
Teachers per audiotape/ cassette machine	813	394	195	224

Table D.31 NUMBER OF CASES ON WHICH ESTIMATES IN TABLE 31 ARE BASED

Medium	Total	Elementary school	Middle/junior high school	Senior high school
ITV	2,127	1,072	531	524
Audio/radio	2,085	1,049	518	518
Computers	1,993	1,001	501	491

Table D.33 NUMBER OF CASES ON WHICH ESTIMATES IN TABLE 33 ARE BASED

Type of Difficulty	Frequency
Finding out about programs in advance	1,392
Having programs available when I need them	1,400
Quality of programs in my subject areas	1,376
Having equipment available when I need it	1,411
Having equipment in good condition	1,387

Table D.37 NUMBER OF CASES ON WHICH ESTIMATES IN TABLE 37 ARE BASED

Medium	Total	Elementary school	Middle/junior high school	Senior high school
Used ITV	1,626	810	400	416
Used audio/radio	1,744	868	441	435
Used computers	804	417	207	180

Table D.53 NUMBER OF CASES ON WHICH ESTIMATES IN TABLE 53 ARE BASED

Average Time Spent by Teachers	Total	Elementary school	Middle/junior high school	Senior high school
Average no. of minutes preparing	810	444	178	188
Average no. of minutes following up	812	447	175	190

Table D.62 NUMBER OF CASES ON WHICH ESTIMATES IN TABLE 62 ARE BASED

Value Statement	Extent of Agreement
Selection of hardware is difficult	819
Schools need help in planning for the changing role of teachers	826
I do not feel comfortable with computers	818
Software available is quite good	803
Teachers want more training	826
Principals need help in software acquisition	823
Emphasis on computers detracts from overall goals	815
Computer-to-student ratio precludes significant use	822

Table D.63 NUMBER OF CASES ON WHICH ESTIMATES IN TABLE 63 ARE BASED

Value Statement	Extent of Agreement
Computers help teacher teach	2,056
One or two students working with computers is disruptive to class	2,011
I want more training in computers	2,047
Software available is quite good	1,973
I don't feel comfortable with computers	2,023
Previewing software should be done by teachers	2,034
Integrating computer time with other subjects is simple	2,020
Equipment is difficult to use	2,017

Table D.69 NUMBER OF CASES ON WHICH ESTIMATES IN TABLE 69 ARE BASED

		Size of District				
Media Coordination	Total	0-2,499	2,500-4,999	5,000-9,999	10,000-24,999	25,000 and over
Coordination of ITV	247	41	36	51	49	70
Coordination of computers	276	58	44	56	54	64

Table D.70 NUMBER OF CASES ON WHICH ESTIMATES IN TABLE 70 ARE BASED

		Size of District				
Media Staff	Total	0-2,499	2,500-4,999	5,000-9,999	10,000-24,999	25,000 and over
No. of other ITV staff	242	42	34	51	45	70
No. of other computer staff	266	59	41	51	51	64

Table D.82 NUMBER OF CASES ON WHICH ESTIMATES IN TABLE 82 ARE BASED

Availability of Workshops	Total	Size of District				
		0-2,499	2,500-4,999	5,000-9,999	10,000-24,999	25,000 and over
No	515	128	92	94	97	104
Yes, ITV	495	116	87	93	95	104
Yes, audio/radio	460	113	77	82	90	98
Yes, computers	502	121	91	92	95	103
Yes, other media	515	128	92	94	97	104

Table D.85 NUMBER OF CASES ON WHICH ESTIMATES IN TABLE 85 ARE BASED

Medium	Total	Elementary school	Middle/junior high school	Senior high school
ITV	375	205	82	88
Audio/radio	287	159	57	71
Computers	621	310	155	156
Other media	387	211	91	85

Appendix E

STUDY ADVISORY COMMITTEE

The successful completion of this study would not have been possible without the expert advice and guidance of the Study Advisory Committee. Members of the SUS-83 advisory committee were–

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